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BALTIMORE, APRIL 27, 1911.

THE SOUTH'S BUSINESS OUTLOOK.

Though unwise political agitation may retard some phases of Southern development and naturally cause investors to be timid; though railroads are still burdened by reason of many unwise legislative requirements, making it difficult to secure new capital for extension and improvements, the progress of the South is moving forward on broad lines. The southward trend of population is expanding, and into every part of the South are coming people from other sections. The building of good roads, always indicative of increasing prosperity and advancing civilization, is everywhere in evidence. Increasing prosperity of the farmers of the whole South is adding greatly to their buying power for the purchase of new farm equipment and the building of homes. The growth of cities goes on apace with widespread activity in municipal improvements, in the construction of sewerage systems and water-works, the erection of municipal buildings and the construction of streets. English capitalists have just made a heavy investment in the purchase of the securities of great plantation properties in the Central South, indicating an awakening interest of English investors in the possibilities of this section. Construction work on interurban railways in the Carolinas, looking to the development of the greatest interurban railway system of the country, is being hurried forward. And so, despite the burden which tariff agitation hangs around the neck of business interests, halting its progress as compared with what it should be, the

material advancement of the South goes steadily forward.

SOUTHERN MEN IN PANAMA CANAL CONSTRUCTION.

One of the most impressive exhibitions of recent times of important work in which Southern men are engaged is made in an article on another page of this issue of the MANUFACTURERS RECORD, in which Mr. John O. Collins gives some details of the careers of Southern men who are now prominent in engineering work in connection with the construction of the Panama Canal. As Mr. Collins points out, four of the seven members of the Canal Commission, all of the division engineers on the canal, the heads of departments of civil government and of sanitation, the Chief Justice of the Supreme Court of the Canal Zone and many other officials there are of Southern origin. How widely the South is represented in the engineering work especially is indicated in the following list of men and the States of their origin:

Lieutenant-Colonel William L. Sibert, U. S. A., member of the Canal Commission and division engineer of the Atlantic division, Alabama.

Major Chester Harding, assistant division engineer Atlantic division, Enterprise, Miss.

Major James Postell Jervey, resident engineer, Gatun Locks, Powhatan county, Virginia.

Ben Johnson, senior superintendent of construction, Gatun Locks, Greenville, Miss.

Robert N. Sands, chief clerk, Atlantic division, Montgomery, Ala.

Lieutenant-Colonel David DuBose Gaillard, division engineer, central division, Fulton, S. C.

Arthur Sessions, superintendent of transportation, central division, Lynchburg, Va.

James Murray McNeill, assistant superintendent of transportation, central division, Huntsville, Tex.

James W. Sneed, superintendent of construction between Gatun and Culebra Cut, New Orleans, La.

Dan Wright, superintendent of municipal work, Winchester, Va.

Sidney Bacon Williamson, division engineer, third division, Lexington, Va.

William B. Corse, one of Mr. Williamson's assistants, Alexandria, Va.

Henry Outen Cole, superintendent of municipal work, Pacific division, Cassville, W. Va.

Alfred Randolph James, junior engineer in charge of construction at Miraflores Locks, Richmond, Va.

Arthur Lee Robinson, superintendent fourth division, in charge of machinery manufacturing and repair work, Louisville, Ky.

The story told by Mr. Collins of the relation of these fifteen Southerners to the carrying out of one of the greatest engineering undertakings in history is one that emphasizes the engineering instinct of Southern men and their ability in managerial positions. It

directs attention to the opportunities for technically-trained young men of the South, and it should inspire the South to all possible efforts to provide that technical training.

ENGLISH CAPITAL INVESTING IN SOUTHERN COTTON LANDS.

English capital has become interested in 32,000 acres cotton land in Mississippi. For several years the possibilities in such investment have been considered, and this definite undertaking may be the beginning of a movement of far-reaching influence for the South. Mr. L. K. Salsbury of Memphis, Tenn., who, with associates, purchased about a year ago 12,000 acres of fine land in the delta of Mississippi and organized the Mary Mac Plantation Company, telegraphs the MANUFACTURERS RECORD that he and Messrs. A. S. Buchanan, Rice Fant and George H. Tucker of Memphis, Tenn.; President William M. Anderson of the Merchants' Bank & Trust Co., Jackson, Miss., and George B. Bell, a capitalist of Chicago, have bought 32,000 acres of cotton lands in Bolivar and Washington counties, Mississippi, and have just completed the organization of two corporations, each with a million and a half dollars capital, to take over these lands and to operate them in the scientific growing of cotton and other crops. An oil mill will be built on the property, and an up-to-date ginning plant with compresses; additional land will be cleared, and the property generally will be improved to the extent of \$1,000,000. The new buildings will be at Scott, Miss., and the executive offices of the companies at Memphis. The stock of the two companies is owned by the six gentlemen mentioned, but the property has been bonded in England. That fact does not imply that the undertaking is in the interest of English spinners, for the crop of cotton will be sold wherever the best price may be obtained.

Under scientific management this land should yield very large profits. The development of the plans will be watched with great interest, as it may point the way to other assemblings of smaller plantations, now under individual ownership, into great tracts owned by American or foreign capitalists, or to the reclamation on a large scale of vast bodies of available land and the introduction of vast economies in cotton raising to the benefit of everybody concerned—growers as well as manufacturers.

THE MAN "ON THE JOB."

Some unnamed friend of Mr. B. F. Bush, recently elected president of the Missouri Pacific Railroad, in discussing his characteristics, said:

It may not be generally known, or altogether agreeable to many others to know, that the real reason Bush was selected for the post was because he will always be on the job. You won't hear a vast deal of Bush attending civic and business organization meetings, making speeches and look-

ing pretty. You won't see his pictures with a dress suit on and a flower in his button-hole. Bush isn't that sort of a railroad president. He is essentially a worker. Someone else can put on the frills; someone else can do the nice work and look pretty, but Bush will be found out on the system, on the bridges, in the culverts and right in the heat and heart of the work all the time. That is really why he was selected. He is young enough to be ambitious and not to be satisfied with what is being done, and always wants to be doing more.

If Mr. Bush is the kind of man here described, he will, we believe, measure up to the opportunity. In these days the holding of conventions has become such a fad that there is little time for those who get the "convention habit" to attend to business. Apparently they are impressed with the idea that being seen at a convention, or being reported in the daily papers as being a delegate to this or that convention, is the chief object of their work. The country has become convention-mad. It is so with cities as to the civic and business interests of local affairs. It is so with many lines of industry, and even to some extent in religious and educational activities.

The man who attends one-half of the conventions to which he is appointed has but little time to do anything else. Very generally he would accomplish far more for the growth of his own city or State and the development of his own business by being, as it is said of Mr. Bush, "always on the job." There are many occasions when the gathering of men in conventions to discuss the welfare of their community or of their individual business is wise and profitable, but if one will stop for a moment to enumerate the almost numberless conventions of every character that are being reported and promoted in every section of the country he will be impressed with the fact that too much time is being wasted in conventions, in speech-making and in posing before the public, instead of concentrating thought and energy and time upon doing the work and being "on the job."

THE STEEL CORPORATION NOT SEEKING TO CONTROL POLITICS.

New York, April 22, 1911.

Editor Manufacturers Record, Baltimore, Md.:

I regret the publications which have been made. Some of the work contemplated probably will not be undertaken at the present. As to the work in process, I hope there will be no material delay. I suppose the free-list bill, if it become a law, may materially affect the Birmingham district, but we never assume an antagonistic position to any law or pending legislation. When requested, we present our views and reasons, but submit cheerfully to the decisions of those who are in authority. Certainly we have the highest opinion of Mr. Underwood personally and of his ability.

E. H. GARY,
Chairman.

The foregoing dispatch from Judge Gary ought to set at rest the reports which have been published broadcast to the effect that the Steel Corporation had ordered a discontinuance of work on its big wire plant at Birmingham for the purpose of affecting the tariff

question now under discussion in Congress. However unwise and injurious to the South may be the tariff agitation, with which business has again been cursed for political effect, no one acquainted with the history of the United States Steel Corporation ought for a moment to have imagined that the able management of that organization would have undertaken to discontinue work on any plant in order to shape political affairs. Judge Gary and those associated with him in its management could but know that any action such as was reported, if it had been taken by them for political effect, would have resulted in bringing about results directly opposite to what they might have desired. As railroads cannot stop running because adverse legislation has made it difficult for them to find money for development work, so a great organization such as the United States Steel Corporation must continue its development work, even though adverse legislation, threatened or enacted, militates against its operations. An action such as that credited to the Steel Corporation, if put into effect for such a purpose, would be the height of folly, and no one has accused the management of the Steel Corporation of lacking in brain power. That unwise tariff legislation may halt new enterprises and lessen the advancement in the building of new works is unfortunately too true; but that the Steel Corporation would discontinue work on a great plant at Birmingham for the purpose of bringing pressure to bear upon the Congressmen from that district is too absurd for any one to have charged against the astute managers of that great organization. The politics played in this case seems not to have been by the Steel Corporation, but by others.

RAILROAD EXPENSES AND PROSPECTS.

President James McCrea of the Pennsylvania Railroad Co., in the annual report of the Pittsburg, Cincinnati, Chicago & St. Louis Railway, one of the roads composing the Pennsylvania system, says that there are an increasing number of items of expense which are entirely beyond control of the management, and that the general tendency in this direction is brought about by regulation through legislation; also that various State and Federal laws enacted during the last 10 years have added heavy burdens to the cost of operation, and that it is becoming increasingly difficult to meet these expenses and also adhere to the high standard of maintenance and operation which the company has established. He remarks that the Legislature of one of the States traversed by lines of his company passed during a recent session some 30 new laws affecting railroads, nearly all of which increase operating cost, and some of which will cause expensive changes in equipment without accomplishing definite results. In conclusion, he notes that these and other burdens of which he makes mention are shared in common by all roads, and there seems to be an ill-defined idea that they may be offset by greater efficiency, but that results thus far are so meager in comparison with the definitely known and increasing expenses that it would appear to be unwise to build too much on hope for relief in this manner.

Possibly the recent refusal of the Interstate Commerce Commission to permit a general increase of rates as proposed by the railroad companies is mainly responsible for the rather pessimistic

tone of the report. The Pennsylvania Railroad Co., it will be remembered, acting in a praiseworthy and law-abiding manner, immediately upon the announcement of the decision attained by the Commission, withdrew from effect certain rates of transportation which it had announced, and its officers doubtless feel that they are, to quote slang of the day, "up against it." The picture presented is one of expenses increasing beyond control of the roads. But a change of public sentiment seems to be under way. Legislatures are not all so furious as that one of the 30 statutes; in fact, they are generally quite tame as compared with what they were several years ago. Even the General Assembly of Texas has toned down, and Oklahoma is displaying signs of repentance if one may judge from current gossip and press reports.

INJURY TO THE SOUTH BY SENSATIONAL DISPATCHES.

The MANUFACTURERS RECORD has repeatedly pointed out the great injury done to the South by the sensational news sent from this section to the newspapers of the North and West. It is bad enough to have stuff of this kind published in Southern papers, some of which give to the sensational side of murders, suicides and other crimes far more attention than the value of the news feature justifies; but to have such dispatches sent broadcast over the United States creates an entirely false impression about the South. Sensational news of this character is not sent from the North and West and the Pacific Coast to the papers of other sections, as is done from the South. Every crime committed in the South seems to be used as a basis for news dispatches to outside papers, whereas the crimes committed in other sections are rarely ever reported beyond the immediate vicinity in which they occur. Thus an entirely false impression about the South, as compared with other sections, is created. This point is illustrated in a letter from W. L. Shafer, secretary of the Chamber of Commerce of Roanoke, Va., who, in thanking the MANUFACTURERS RECORD for a recent article on Roanoke, says:

I had a Pittsburg man—a wide-awake fellow—say yesterday that he was never so surprised in any city as in Roanoke. From press dispatches he had considered Roanoke the "rough and rowdy" place that all kinds of murders and scrapes within a hundred miles, published under a Roanoke date line, would indicate. He delighted himself in finding a real, live, hustling, livable city—and wants to make it his home. We shall try to see that the A. P. news items carry something substantial as well as sensational.

A thousand things of far more general interest and of infinitely greater importance are happening in all parts of the South than crimes, but the good things receive scant notice in press dispatches, and very generally are entirely omitted, while murders and fights and everything else out of which a sensation can be created are apparently grabbed with great eagerness by the writers of these sensational stories for outside publication. The business organizations of every city in the South ought to undertake an earnest, vigorous campaign to bring about a change. They ought to induce the writers of press dispatches—who are generally known in their local cities—to stop sending out such stuff, and whenever it is feasible send out information indicative of the material or educational advancement of this section. Roanoke is only an illustration of how other places suffer from the ill-effects of such dispatches.

MISSISSIPPI SEEKING TO ATTRACT IMMIGRATION.

The Mississippi Land Development Association, organized about a year ago with Mr. L. E. Davis of Natchez, secretary and general manager, is planning for a second State-wide immigration convention in June. Its members would do well in the meantime in preparing to make practical application of certain truths suggested in the following from the Hattiesburg News:

There are several truths we wish very much this people would stare right in the face and quit side-stepping. A great big boom is headed toward the South, and there is no stopping it. But Mississippi is a small part of the South, and the biggest boom that ever hit a country might hit the South with full force and effect and not touch Mississippi. That is truth number one.

Truth number two is that this is an advertising age. People who will not accept and act upon that truth are simply living and trying to do business behind their age. The advertising spirit is so general, publicity is so universally adopted as the best method to promote anything of a general nature, that States and cities have taken on to advertising ways just as all up-to-date merchants have, and the State or municipality that does not advertise is as much behind the time and is as certain to get left in the growth and prosperity that may come to a section as the non-advertising merchant is to the local trade of his community.

This cut-over land is rich in soil productiveness, but it will not produce unless it is made to produce. This section is rich in resources, but these resources will not produce unless they are made to produce. These lands can be sold, but they will not sell themselves. Immigrants can be brought here, but they will not come unless they are brought. Despite lethargy and all hindrances, this section will grow, slowly; but if we as a people hope or expect to get advantage of the great growth that will come to the South this year and next year and the year after next, if we hope to ride the "great wave of prosperity" that threatens to flood the South, if we hope to be near that center of civilization which Champ Clark says is destined to become the richest section of this Union, Mississippi must get busy and organize and co-operate and advertise, and become conspicuous before the world as a particularly advantageous spot for the homeseeker, the capitalist, the investor.

No more definite point for the concentration of energies in behalf of immigration to Mississippi comes to mind at present than the plan endorsed by the Mississippi Pine Association of turning the cut-over timber lands in that State into productive farms. There are 2,656,672 acres of such lands in the State, and demonstration has been made that they can become exceedingly profitable farm lands. Divided into 100-acre tracts, they could become more than 26,000 farms, supporting immediately at least 125,000 new citizens and adding immensely to the agricultural wealth of the State. If the June convention can devise means for directing the attention of desirable men of other States to the opportunities in these lands, it will make first-class advertisement of Mississippi, the effects of which will be felt not merely by the owners of the cut-over lands, but by the people of the whole State.

BEST SELLERS.

That splendid exposition of the six Northeastern States, entitled "New England," to which the MANUFACTURERS RECORD has already referred, had the distinction of being a "best seller" in the non-fiction list of books in Boston two weeks ago, according to the Boston Chamber of Commerce News. The increasing number of readers of this handsome volume are convinced, we are sure, that it should be not only a best seller, but the best seller, and not only in the non-fiction class, but for the time being in all classes of literature. The head of every New England family at

home should have a copy for the library, which would mean a sale of at least 1,500,000 copies, and another million ought to be marketed among New Englanders of the dispersion. For the New Englander and, indeed, for intelligent men of other sections who wish to be informed about their country, the volume beats any piece of fiction to a frazzle, and it is just as absorbing of interest.

HUNTING BUSINESS EGGS AS A SPORT.

"Don't worry about why the black hen laid the white egg. Be busy and get the egg," is a statement made by H. Stevens' Sons Company of Macon, Ga., in a circular which they are sending out about their sewer pipe.

This homely illustration can be profitably taken to heart by business men generally. Many eggs are being laid in the way of new enterprises, new work of all kinds, furnishing a wide field for business activity, but a good many people are not looking for the eggs with the vigor with which the small boy around the farm hunts under the barn and in the haystack and everywhere else where there is a possibility that an egg may have been laid. Sometimes the cackling of the hen gives an intimation as to where the egg may be found, but the small boy does not always wait to hear the cackle; he looks in every place where by any manner of means an egg may have been deposited.

The hustling business concern, the individual man, the engineer, the contractor, the salesman of machinery or supplies is each on the lookout for the eggs of business. The man who expects the hen to have any regard for his comfort and to lay the egg only in the appointed place where he has made a nest for her will often get left. Business eggs must be hunted for with the enthusiasm of the small boy after the hen's nest or the fisherman following the mountain brook in eager quest of sport, or the hunter who, with intense energy, with every nerve quickened, watches as he moves through the woods for every sign indicative of the possibility of game. Ten hunters may roam the woods looking for game. Nine of them will likely be disappointed and get nothing, while the tenth man, with eye and ear trained and every faculty alert, will be successful.

As it is in hunting, so it is in business. There must be initiative, intense energy, and the eye and the brain must be trained to find the game which the other nine hunters have perchance passed by without seeing.

THE AUTO ON THE FARM.

Says the Southern Democrat of Oneonta, Ala.:

A farmer down in Henry county has been using an automobile to break his land. He hitches a plow to the auto and turns the dirt over at a rapid rate. It looks like the old mule is destined to get a rest.

That Henry county farmer is really pointing the way to a revolution in farming almost as important and far-reaching in its effects as the change from the scythe, the sickle and the flail to the mechanical harvester and threshers. In an amateur sort of a way he is a participant in the substitution under way for animal or human power of gasoline, kerosene or steam motors in plowing and harrowing, of the self-propelled cultivator, of the tractor, of the plow or other implement, the ditcher or other mechanical device, which may also be adapted to threshing, pumping,

feed-chopping, wood-sawing and other operations on the farm. He has merely used his automobile as a tractor, and there are but a few steps from that to the auto-plow, the auto-cultivator and the auto-harvester, corresponding on the farm to the auto-truck, which has already become so useful in many commercial lines, and rendering the farmer independent, to a large degree, of the older sources of power not without their temporary embarrassments. The new regime, the regime of the auto on the farm, which was discussed as to its earlier steps in last week's issue of the MANUFACTURERS RECORD, will not necessarily, though, mean rest for the "old mule." In spite of the vast extent of the use of the automobile, there is still plenty of work for the horse, and it will continue. So, on the farm, the substitution of mechanical power for animal power will not destroy the usefulness of the animal, but will only give it the chance to be useful in other directions. As a matter of fact, the demands from other fields for man-power and horse-power is so pressing that the proper mechanical power can hardly be devised soon enough to meet an emergency.

THREE GREAT BUILDING MATERIALS.

Developments during the past 20 years in the production of three of the great materials entering into construction work in this country—lumber, steel and Portland cement—suggest some interesting considerations. In the following table production of the three materials in 1890, 1900 and in every year since 1904 is shown:

| Years. | Lumber. Feet. | Steel. Tons. | Cement. Barrels. |
|-----------|------------------|-----------------|---------------------|
| 1890..... | 23,494,853,000 | 4,277,071 | 335,500 |
| 1900..... | 34,780,513,000 | 10,188,329 | 8,482,020 |
| 1904..... | 34,135,139,000 | 13,859,887 | 26,505,881 |
| 1905..... | 30,502,961,000 | 20,023,947 | 35,246,812 |
| 1906..... | 37,550,736,000 | 23,398,136 | 46,463,424 |
| 1907..... | 40,256,154,000 | 23,362,594 | 48,785,390 |
| 1908..... | 33,234,369,000 | 14,023,247 | 51,072,912 |
| 1909..... | 44,599,761,000 | 23,955,921 | 62,508,461 |
| 1910..... | *45,000,000,000 | 26,094,919 | *74,000,000 |

*Estimated.

Lumber production between 1890 and 1910 shows more fluctuations than do the other materials, though that may be due to the fact that there have been variations in the number of lumber mills reporting. For instance, the number reporting in 1908 was 33,021, of which 2392 were idle, and the number reporting in 1909 was 51,206, of which 3154 were idle. So, too, the census bureau points out that in 1907 only 28,850 mills reported, and that it is practically certain that had the canvass of that year been as thorough as the canvass of 1909 the reported production in 1907, instead of being 40,256,154,000 feet, would have been considerably in excess of the 44,609,761,000 feet reported in 1909. Nevertheless, imperfect as the figures of the lumber cut may be as compared with those of the production of steel and Portland cement, the general tendency in production is manifest.

Between 1890 and 1900 the production of lumber increased from 23,494,853,000 to 34,780,513,000 feet, or by 11,285,660 feet, equal to 48 per cent., and of steel from 4,277,071 tons to 10,188,329 tons, or by 5,911,258 tons, equal to 138 per cent., while the output of Portland cement increased from 335,500 barrels to 8,482,020 barrels. Lumber and steel showed in 1908 the effects of the financial disturbances of the winter of 1907-08, and, indeed, those effects were manifest in the 1907 steel production, which fell off 35,000 tons from the 1906 production. Between 1900 and 1910 the rate of increase in lumber production

decreased, although steel production increased from 10,188,329 to 26,094,919 tons, or by 15,906,590 tons, equal to 156 per cent. In that period production of Portland cement increased nearly nine times to a total between 73,000,000 and 75,000,000 tons.

There are limits to the production in this country both of lumber and steel as compared with Portland cement. In spite of estimates of iron-ore resources, there is no ground for immediate fear that the limit of steel production will soon be reached. But it is obvious that with timber being cut much more rapidly than reproduction of forests may take place, the end of lumber as a fundamental source of wealth must come with comparatively few years unless a radical change of policy in handling the remaining timber of the country be adopted.

It is hardly likely that any more distinct uses for lumber will be devised, but it is probable that within the next 50 years at least, with lumber becoming more and more valuable, the demands upon steel to take its place will be greater and greater. In the same time the call for Portland cement in construction work, both as a substitute for lumber and in combination with steel, is also bound to become greater. Although the production of Portland cement increased between 1900 and 1910 from 8,482,020 barrels to 74,000,000 barrels, the various uses to which that material may be put, either by itself or in combination with other materials, have hardly been defined, and the extent of the materials entering into cement production has not been mapped because it is practically illimitable. For many years to come the uses of the three materials may be expected to overlap or blend and to be mutually influential in construction work, and it will probably be centuries before either of them loses its importance.

PAPER AND WOOD PULP.

Between 1890 and 1909 there was an increase in the quantity of wood pulp used in the manufacture of paper from 1,173,000 tons to 2,834,000 tons; in rags, including cotton and flax waste and sweepings, from 235,000 tons to 358,000 tons; in old paper, from 356,000 tons to 983,000 tons; in manila stock, from 90,000 tons to 117,000 tons, while there was a decrease in straw from 367,000 tons to 303,000 tons. The cost of all these materials increased from \$44,321,000 to \$107,607,000, and the value of the products increased from \$127,327,000 to \$267,869,000. Of the products, news paper increased from 569,000 tons to 1,176,000; book paper, from 352,000 tons to 746,200 tons; writing paper, from 90,000 tons to 169,000 tons; other fine paper, from 23,000 tons to 29,000 tons; wrapping paper, from 535,000 tons to 764,000 tons; boards, from 366,000 tons to 832,000 tons; tissues, from 28,000 to 78,000; blotting, from 4000 to 10,000; building, roofing and sheathing, from 97,000 tons to 218,000 tons; hanging, from 54,000 to 92,000 tons, and miscellaneous, from 49,000 tons to 104,000 tons.

THE COTTON MOVEMENT.

In his report for April 21 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 233 days of the present season was 10,980,553 bales, an increase over the same period last year of 1,520,045 bales. The exports were 6,819,458 bales, an increase of 1,646,021 bales. The takings were, by Northern spinners, 1,817,090 bales, a decrease of 2784 bales; by Southern spinners, 1,798,564 bales, a decrease of 10,328 bales.

Southern Men Leading in Isthmian Canal Engineering.

By JOHN O. COLLINS of Ancon, Canal Zone.

Four of the seven members of the Isthmian Canal Commission, all the division engineers on the Panama Canal, the heads of the departments of civil government and of sanitation, the chief justice of the Canal Zone Supreme Court and many other officials of high standing in the canal work are men of Southern birth and upbringing. The purpose of this article is to tell something of the men and their work who are prominent in the actual construction of the canal.

The chief engineer, Col. Geo. W. Goethals, has divided the construction work into four divisions, and over each of these divisions he has placed a Southern man. To understand somewhat of the work they are doing it is necessary to know that the canal consists of three distinct sections or divisions: (1) a sea level channel eight miles long, running from the Atlantic Ocean to Gatun, at which point ships bound from the Atlantic to the Pacific will be lifted in three locks to the level of Gatun Lake, 85 feet above the sea; (2) a lake level channel 34 miles long, including the cut through the continental divide known as Culebra Cut; (3) a flight of three locks in which ships will be lowered from the lake level to sea level, and a channel eight miles long at sea level to the Pacific Ocean. Each of these sections is a construction division, and the fourth division is devoted to repairing the tools and equipment with which the canal work is carried on.

Lieutenant-Colonel Sibert and His Assistants.

The first of these divisions is in charge of Lieutenant-Colonel William L. Sibert, U. S. A., a member of the Isthmian Canal Commission and division engineer of the Atlantic division. The work he directs includes the dredging of the sea level channel from the ocean to Gatun locks, the building of the locks and the construction of Gatun dam.

Eighty-five hundred men are under his orders, doing every conceivable form of construction work. A great quarry and sand pits which furnish rock and sand for the concrete in Gatun locks, a whole fleet of tugs and barges, a dozen dredges and a half dozen steam shovels, a construction railway and concrete mixing and placing plants capable of turning out 300 cubic yards of concrete in eight hours are among the tools with which Colonel Sibert and his men do their work. They are building locks that will be a mile long, and a dam so large that it resembles a long, low hill closing a valley one and one-half miles wide. As to how they are doing this work, it is sufficient that it follows the plans, is costing less than the estimated cost, and will be completed a year or more in advance of the estimated time.

A few days ago Colonel Sibert stood on the veranda of the office building at Gatun, which commands a view of the locks and dam and a glimpse of the dredges at work in the Atlantic entrance. An hour before the concrete layers in the locks had completed the first half of their work.

"Thirty months more and there will be little to do at Gatun," he said, "and then I shall consider my engineering work ended and shall be ready to go to a farm in Maryland or Virginia for the rest of my life."

It was a natural thought, for, although still a vigorous man in all ways, it would seem out of the question for him to engage seriously in any other work after this he is on is completed. Any other would be an

anti-climax after Gatun locks and dam. And it was natural, too, for his thoughts to turn to a farm in the South, because it was from a country village in Alabama 30 years ago, when a boy of 20, that he went to West Point. He was graduated from the Military Academy in 1884 as a second lieutenant of engineers, and in 1887 was graduated from the Engineer School of Application. From this time on his work was almost exclusively of a nature to fit him for lock and dam construction on the Panama Canal.

From 1887 to 1892 he was engaged in lock and dam work on the Green and Barren rivers in Kentucky; from 1892 to 1894 he had experience on the St. Mary's Canal and locks in the Great Lakes system, and had charge of the channel from Lake Huron down to Lake Erie. From 1894 to 1898 a part of his work involved the study of the canalization of the upper White River in Arkansas, a project which involved the construction of locks and dams. In 1900 and 1901 he had charge of the Louisville and Portland Canal, and, in addition, the locks and dams on the Wabash, Green and Barren rivers. In 1901 he was in charge of the improvement of the Monongahela, Allegheny and Ohio rivers near Pittsburgh, which involved the construction of six locks and dams on the Ohio River, ten locks and eight dams on the Monongahela River and three locks and dams on the Allegheny River.

An incident of his work in the Pittsburgh district was the destruction of the Springdale dam on the Allegheny River during the freshet of the spring of 1906. The river rose suddenly, threatening to destroy one of the suburbs of Pittsburgh, in which there were millions of dollars' worth of property. Something must be done at once. Sibert could have thought of himself first and telegraphed to Washington for instructions. What he did do was to blow up the dam with dynamite, thus saving the village, and then telegraph to his superiors. The value of the dam he destroyed was counted in thousands of dollars; of that he saved by his prompt action, by millions.

During the Spanish-American War he was in the field in the Philippines as a captain of engineers. He was a major in the Engineer Corps, U. S. A., in 1907, when the second civilian chief engineer of the Panama Canal resigned, and the work of construction was turned over to the army engineers. Major Sibert was made a member of the Isthmian Canal Commission, and upon arrival on the Isthmus was given charge of the department of lock and dam construction, which was abolished a year later, when he was assigned to carry on the construction of Gatun locks and dam.

The assistant division engineer of the Atlantic division, Major Chester Harding, was born in Enterprise, Miss., in 1866, but in 1871 his family moved to Tuscaloosa, Ala., and he was appointed to the Military Academy from Alabama in June, 1885. After graduation into the Engineer Corps he was at the Engineer School of Application at Willets Point for two and one-half years. In 1892 he was sent to Chicago on harbor improvement and river work, which included the construction of locks and dams on the Illinois and Mississippi River Canal. From 1894 to 1896 he was stationed at St. Louis, and his work included revetment and contraction of the Mississippi River and the main-

tenance and operation of snagboats south of St. Louis. After a few months of duty in the office of the Chief of Engineers in Washington in 1896, he was assigned to West Point as instructor in civil and military engineering, and remained there until February, 1899. The next two years he spent dredging harbors and constructing piers on Lake Michigan. In 1901 he went to Washington as assistant to the Engineering Commissioner of the District of Columbia, and for two years he had charge of the sewer, water and building departments of the District Government. From 1903 to 1907 he was in charge of the construction of the new municipal building in Washington, and during one year he was also instructor of civil engineering at the Engineer Corps School at Washington Barracks. Major Harding was detailed for duty on the Panama Canal in 1907, and was made division engineer in charge of the construction of Gatun locks.

Under his direction the detail plans for the cableway handling plant for placing concrete in Gatun locks were worked out. The system has proven itself well adapted to the work, and it actually has developed a higher efficiency than was called for by the specifications. When the lock work was merged with that of the dam and the sea level channel into the Atlantic division in 1908, Major Harding became assistant division engineer under Colonel Sibert, and his work in that capacity is as executive officer to his chief.

The resident engineer in direct charge of the construction of the locks is Major James Postell Jervey, a native of Powhatan county, Virginia. He is 41 years of age. He was appointed to the Military Academy at West Point from Georgia in June, 1888, and after graduation there in 1892 he spent three years at the Engineer School of Application. The next year he spent on lock, river, harbor and fortification work in Alabama, and the following two years he was in charge of the design and construction of fortifications and wharves at Pensacola, Fla. From January, 1899, to June, 1905, he was on duty at the Military Academy as instructor in engineering and assistant professor in civil and military engineering. From October, 1905, to August, 1907, he did duty in the Philippines, first as engineer of the Iligan Lake and Lanna road, then in charge of railway surveys, bridge, wharf and building construction of the Moro province, and later in local charge of the construction of the fortifications in Olongapo harbor. After an eight months' duty as instructor in the Engineering School at Washington Barracks, he was detailed to duty on the Panama Canal in July, 1908, and was made resident engineer, in charge of the construction of Gatun locks, in July, 1909. In his work at Gatun Major Jervey is in direct charge of the largest concrete-mixing plant in the world, and of the handling of materials and placing of concrete and steel in the locks.

Directly under Major Jervey at Gatun locks, the senior superintendent of construction, is Ben Johnson, age 44, a native of Greenville, Miss. He was graduated from West Point in June, 1889, but on September 30 of that year resigned as second lieutenant of artillery to enter engineering practice. He did engineering and contracting in Mississippi until 1894, when he became assistant superintendent of the New Orleans Traction Co. at the time the railways were changed from mule to electric power. From that time until 1903 he was engaged principally in designing and constructing electric railways, his work including the systems at Madison, Ind.; Greenville, Miss.; Natchez, Miss., and Beaumont, Tex. For the next two years he was in Mexico, where he de-

signed, built and operated a copper smelter. From 1905 to December, 1907, he was in general engineering practice at Vicksburg, Miss., during which time he designed or constructed municipal works for eight cities in Mississippi and Louisiana. Since December, 1907, he has been on the excavation and concrete work on the Panama Canal as a superintendent of construction.

The chief clerk, in charge of the office work of the Atlantic division, reporting directly to Colonel Sibert, is Robert N. Sands, who was born in Montgomery, Ala., 33 years ago. He was stenographer to the district attorney of the Louisville & Nashville Railroad in Montgomery, and later secretary to the Mayor of that city. He came to Panama in August, 1905, and had already worked his way to the front when Colonel Sibert arrived on the Isthmus in March, 1907. He was assigned to work in Colonel Sibert's office, and on the organization of the Atlantic division in 1908 he was made chief clerk of that division.

Lieutenant-Colonel Gaillard and His Men.

David DuBose Gaillard is the division engineer of the central division of the Panama Canal, and in this capacity has charge of the largest excavation job in the world.

That term "largest in the world" is commonplace on the Panama Canal, and conveys little. Nor does it mean much more to say that the channel from Gatun locks to Pedro Miguel locks is his special care, although that is 32 miles long and from 300 to 1000 feet wide. The work is being done with 50 steam shovels, 100 miles of railroad, 160 locomotives, 7600 cars, and by 10,000 men. Tons of dynamite are used every month. Even with all this information, figures fail to measure the job.

The greater part of the work is in Culebra Cut, where a channel 300 feet wide is being dug through the continental divide. This section of the canal is nine miles long and from 100 to 560 feet deep, as measured from the original surface of the ground. And still figures fail to express the immensity of the work. Even seeing it gives no adequate idea, unless one realizes that each of the 50 steam shovels is doing a big job in itself. One day last week one of these shovels dug out and loaded on cars 3700 cubic yards of rock and earth. That amount is equal to 3700 two-horse loads. It would take a man with a pick and shovel two years to accomplish that much excavation, and this represents only one-twentieth of the excavation in the central division on that day.

Colonel Gaillard was born in Fulton, Sumter county, South Carolina, in 1859, and was graduated from West Point in 1884. After three years in the Engineer School of Application he had charge of various surveys and harbor improvements in Florida until 1891; for the next three years was on the boundary survey between the United States and Mexico, and for the following three years was in charge of the aqueduct which brings Potomac River water into the city of Washington. During the Spanish-American War he served in the United States and Cuba. He was assistant to the Engineering Commissioner of Columbia from 1899 to 1901, and had charge of all of the river and harbor improvements of Lake Superior from 1901 to 1903. From 1903 to 1904 he was on duty at the Army War College in Washington, and during the two years following was Chief of the Military Information Division of the Army of Cuban Pacification from 1906 to 1907.

The experience of Colonel Gaillard prior to his arrival on the Isthmus in March, 1907, included little dry excavation work

such as he has charge of on the Panama Canal. In fact, he was primarily a dredging man, as his book on "Wave Action in Relation to Engineering" bears witness. During his first year in Panama he had charge of the department of excavation and dredging, but in the reorganization of July, 1908, Colonels Goethals made him division engineer of the central division. He found the work well planned and developed, and in the charge of competent assistants, and the esprit of the force very high. Under his administration the spirit has suffered nothing, and the amount of work accomplished has increased from month to month, while the price has gone down, notwithstanding that some of the best men of the division have been drawn away from the force by offers of better positions elsewhere.

Of Colonel Gaillard's assistants occupying positions of independent responsibility, five are Southern men. Two of these are in charge of the work of transporting spoil from the canal to the dumps, to Gatun dam and to a breakwater being constructed at the Pacific entrance to the canal. It has often been remarked that the digging of Culebra Cut is a transportation problem; that is, that the main obstacle is not digging, but hauling the spoil out of the canal. You may have observed in watching pick and shovel excavation the method known as the "run around." A number of men with wheelbarrows walk slowly past the point where the pick and shovel men work, and as they pass their wheelbarrows are loaded by successive shovelers each throwing on a shovelful of earth. On a large scale this plan is followed in Culebra Cut. The trains of from 20 to 30 cars are hauled into the cut on four main lines, or tracks, and are switched off to side lines, on which they run alongside the steam shovels. A series of trains thus enters the cut on one system of tracks and leaves it on another. Two hundred trains are handled in a nine-hour day.

In direct charge of the movement of these trains is the superintendent of transportation, Arthur Sessions. He was born in Lynchburg, Va., 41 years ago, but when only four months old his parents took him to Macon, Miss., and he claims that State as his home. When he was 13 years of age his uncle, a train dispatcher at Waynesboro, Miss., took him into his office, and he has been in the railroad business ever since. He had a variety of experience as operator, dispatcher, chief dispatcher and trainmaster on railroads in the States, and he was trainmaster on the Chicago & Great Western Railroad at Chicago in May, 1905, when John F. Wallace, the first chief engineer of the Panama Canal, offered him a position as trainmaster in Panama. On July 1, 1908, he was made superintendent of transportation in the central division, reporting direct to Lieutenant-Colonel Gaillard.

The assistant superintendent of transportation is James Murray McNeill, a son of Col. Harry C. McNeill of the Texas Volunteers, C. S. A. He was born in Huntsville, Tex., on May 15, 1873, and was a student in the Agricultural and Mechanical College of Texas, when an opportunity to take up railroading came in 1890, and he entered the employ of the Mexican International Railroad. He was a telegrapher there and on the Fort Worth & Rio Grande Railway, and then became a dispatcher on the Mexican International. He served two years in Cuba as dispatcher and yardmaster, and came to the Isthmus in 1907. Since June, 1910, he has been assistant superintendent of transportation.

All the excavation between Gatun and Culebra Cut is in charge of James W. Sneed, superintendent of construction. He is a native of New Orleans, 38 years of

age. In his sophomore year at college the roving idea took him, and, as a railroad was the means, he became a railroad man. He served two years as a brakeman and eight years as a conductor, and was also engaged on other railway work. His record includes service on the Illinois Central, Missouri, Kansas & Texas, Guatemala Northern, Honduras National and Cuba Eastern railways. He came to Panama as a conductor in November, 1906, and his advancement here has been rapid. In January, 1907, he was made assistant supervisor; in June of the same year was promoted to assistant superintendent of construction. One year later he was made superintendent of construction. A dozen steam shovels work under his direction, and he supervises the largest dumping ground on the canal.

A Virginia man, Dan Wright, has charge of the work of keeping the compressed air and water pipe lines in repair, and of building highways and doing other municipal work. There are miles of air pipe lines in Culebra Cut, and many miles of water pipe, and only by a thorough system are they kept in order, because blasts, the completing of a steam shovel cut, the exigencies of track construction and the slides on the banks all work together to make the task difficult. Mr. Wright was born in Winchester, Va., in 1883, and in 1904 was graduated from the Virginia Polytechnic Institute at Blacksburg. He came direct to the Isthmus and earned his spurs in the canal service. After occupying various engineering positions, he was made superintendent of municipal work in June, 1908, and in July, 1910, there was added to his duties the supervision of air and water lines.

Sydney B. Williamson and His Men.

Sydney Bacon Williamson has charge of the third division of the canal work; that is, as division engineer, he directs the construction of the locks at Pedro Miguel and Miraflores and of the channel at sea level from Miraflores locks to deep water in the Pacific Ocean.

He is a Virginian; his assistant division engineer, John M. S. Watt, has spent all his life in the South, one of his resident engineers, the office engineer and one of the field engineers are Southern men. But that has no significance, except as an interesting coincidence. Mr. Williamson is division engineer because a New York State man named Goethals has unlimited confidence in his judgment in planning and his ability to execute, and the Southern men in the Pacific division are there simply because they are able to impress Mr. Williamson in the same way that he impressed Colonel Goethals. It was in 1896 that Williamson first met Goethals, who at that time was one of the captains in the Army Engineer Corps, and had charge of the work of canalizing the Tennessee River in Alabama.

Mr. Williamson was born in Lexington, Va., in 1865, was graduated from the Virginia Military Institute in 1884, and after two years at Kings Mountain Military Academy in South Carolina as instructor of cadets he entered engineering in the service of the St. Paul & Duluth Railroad. His first independent work was in Montana, where he had charge of the construction of a branch line from Billings to Red Lodge for the Northern Pacific Railroad. After that he formed the partnership of Williamson & Earley at Montgomery, Ala., a firm that designed and superintended the construction of various municipal works in several Southern cities. In 1896 he entered the employ of the Government, and under the Army Engineers had charge of surveys on the Muscle Shoals Canal in Northern Alabama. Later he was placed in charge of the construction of the

locks at Colbert Shoals, and there he met Capt. G. W. Goethals.

While he was on this work the Spanish-American War came on. He was granted leave of absence, and served six months as a captain in the Third Volunteer Engineers in Porto Rico. He returned to Muscle Shoals and remained 18 months, after which he took charge of the fortification work at Newport, R. I., under Major Goethals. After two years at Newport he resigned and became engineer of the Expanded Metal Engineering Co. in New York, and one year later, in 1905, opened an office as consulting engineer in Baltimore.

Goethals had been in Panama only a few weeks when he saw the need of Williamson on the lock and dam work, just then developing at the Pacific entrance of the canal, and in May, 1907, Williamson took charge of that work. He is the only civilian engineer in charge of one of the three construction divisions. His work includes the construction of three twin locks, like those at Gatun, and the building of two earth dams, large in comparison with almost any dam, except that at Gatun. On this work, as at Gatun, the tests are the rapidity and cost of construction. On the first point it is sufficient that the Pacific locks will be completed in 1913, and on the second that the concrete is costing only half of the estimated cost.

The job was his from the time the first yard of earth was moved, the layout of quarry, sand and cement supply, the mixing and handling plants all were under his eye, and he is laying concrete for 50 per cent. of the expected cost.

One piece of work that is yet in the experimental stage is a hydraulic excavation plant at Miraflores locks. A party of mining engineers that visited the canal this year regarded this as a bold departure. Yet it was based on study and experience. At present the indications are that it will be successful; that is, that it will do the work more economically than it could have been done by steam shovel.

In emphasizing the head of a work one has in mind chiefly the work itself, and so when it is said "Williamson did this" there is no disposition to detract from credit due his subordinates, because the fact that each man is doing his share is what makes the force under Colonel Goethals comparable with a victorious army. The work to be done and the equipment and force with which it is being done in the Pacific division are about the same as in the Atlantic division, including a quarry, sand pits, a railroad, dredges, tugs, barges, a steamship and concrete plants.

One of Mr. Williamson's first assistants is William B. Corse, resident engineer of the district that includes the lock and dam work. He was born in Alexandria, Va., 43 years ago, and, being a Virginian, knows no other home. He had extended experience as an engineer in the geological survey and in private practice before he came to the canal work in January, 1910. The excavation, dam and lock building at Miraflores and Pedro Miguel are in his residency.

The office engineer and superintendent of municipal work in the Pacific division is Harry Outen Cole, who was born in Cassville, W. Va., in 1874, and was graduated from the University of West Virginia in 1898. He was brought to the Isthmus because a man with experience in structural steel and bridge work was needed by Mr. Williamson in the construction of the cantilever crane handling and mixing plants for concrete at Pedro Miguel and Miraflores locks. From July, 1898, to November, 1903, he was an engineer in the employ of bridge and structural steel

companies, and from March, 1904, until July, 1907, was in direct charge of bridge designing in the office of V. S. Bogue of New York. He was engaged on bridge design and as expert computer for the Blackwells Island bridge investigating committee in September, 1908, when he became a Panama Canal engineer. His work on the canal falls under the heads of office engineering and of constructing and maintaining water-works, sewers and roads in the Pacific division and the city of Panama.

Alfred Randolph James is the junior engineer in charge of construction at Miraflores locks, where 1,362,000 cubic yards of concrete are being placed, an earth dam is in process of construction and excavation by steam shovels, channeling machines, elevator dredge and the sluicing process is in progress. He was born in Richmond, Va., in 1881, and entered engineering in 1900, when he went to work for the Baltimore & Ohio Railroad in Baltimore. The following year he was employed on electric railway work in and around Baltimore, and for the following two years was at the University of Virginia, where he took a course in civil engineering. In 1904 and 1905 he was in Florida on surveys for the Atlantic Coast Line, and in 1905 and 1906 was in Baltimore as a draftsman in the service of the Baltimore & Ohio. In 1906 he became assistant to the chief engineer of the United Railways Co. of Baltimore, and from that position came to the Isthmus in 1907. His experience on the canal work has included both construction and office engineering, and for some time he was chief draftsman in the office of the division engineer of the Pacific division, from which position he was promoted to his present grade of junior engineer.

A. L. Robinson and the Mechanical Work.

The fourth division of the canal construction is devoted to keeping in repair the equipment used in the work, and of doing such manufacturing in machinery and repair shop as can be done more economically on the Canal Zone than in the States. Arthur Lee Robinson, as superintendent of this division, has immediate charge over the machine shop and foundry at Gorgona, where 1500 men are busy; over three air compressor and electric power plants and two locomotive round-houses, where 500 men are employed. The chief work under his direction is that of keeping in repair 350 locomotives, 5500 freight cars, 50 passenger coaches and 120 pieces of miscellaneous equipment, such as piledrivers, spoil unloading and spreading machines, track shifters and locomotive cranes. There is also a large amount of repairing for the floating equipment, and for part of the mechanical equipment used in lock building.

Mr. Robinson is a native of Louisville, Ky., and is 40 years of age. After graduation from the Rose Polytechnic Institute in 1895, from the course in electrical and mechanical engineering, he entered the service of the Southern Railway as an apprentice in the machine shop at Knoxville, where he served until May, 1898, when he entered the navy as assistant engineer with the grade of ensign. He went on the United States steamship Monadnock to the Philippines, and resigned from the service in December, 1898. He then re-entered the service of the Southern Railway as electrical engineer, and was in charge of all the electrical work of that railway system until January, 1901. He was general manager of a mining company in California until October, 1903, when he returned to the Southern Railway as master mechanic of the St. Louis-Nashville lines, with headquarters at Princeton, Ind.

He resigned from that position in May, 1905, to become electrical engineer for the Isthmian Canal Commission, and on April

1, 1910, he was made superintendent of the mechanical division. Ancon, C. Z., April 8.

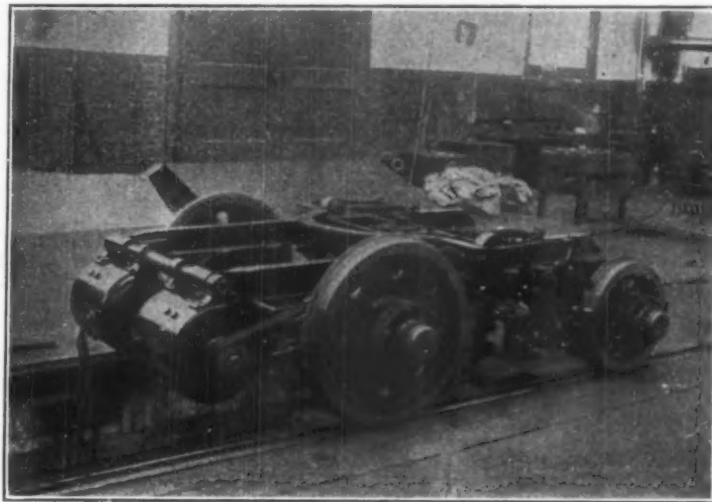
STORAGE BATTERY ELECTRIC CARS FOR THE SOUTH.

[Special Correspondence Manufacturers Record.]

Concord, N. C., April 22.

It is generally conceded that the first electric street-car line is distinctly a Southern proposition—that is, the first development of this system of transportation took place below the so-called Mason and Dixon line—and now the South is again coming to the front in the

Washington. The cars are popular, as there is a decided saving in electricity to operate them. On the Washington & Spn Springs Railway, Washington, D. C., operating the Beach cars, running over an 8 per cent. grade, their experience shows that the Beach car equipped with the Edison storage batteries consume about one-



TRUCK FOR DOUBLE TRUCK STORAGE BATTERY CAR.

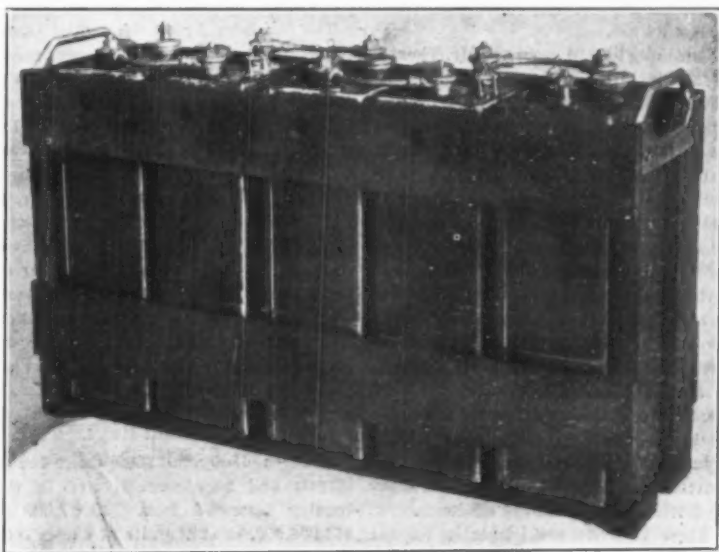
matter of electric-propelled cars and other vehicles.

There is a company now being organized for the purpose of handling the Edison storage batteries and the Beach storage-battery cars in the South, with principal office in Atlanta and several branches. Concord, N. C., will have the first storage-battery cars ever used on a Southern road or ever shipped below the Potomac River.

This car at Concord is to be operated on two miles of road, and its performance will be watched with interest, especially as at this time there is so much actual

fifth of the current of the overhead trolley, and this saving holds good on other roads using them, as with the car of the same carrying capacity the trolley would require at least four 40-horse-power motors; the Beach car gives the same service with four 10-horse-power motors. The saving is mainly caused by the application of the power to each wheel direct, and the wheels rotate on the axles. This independent wheel action eliminates friction at curves, etc.

In the development of these cars Mr. Edison associated with him Mr. Ralph H. Beach, whose name the car bears, to



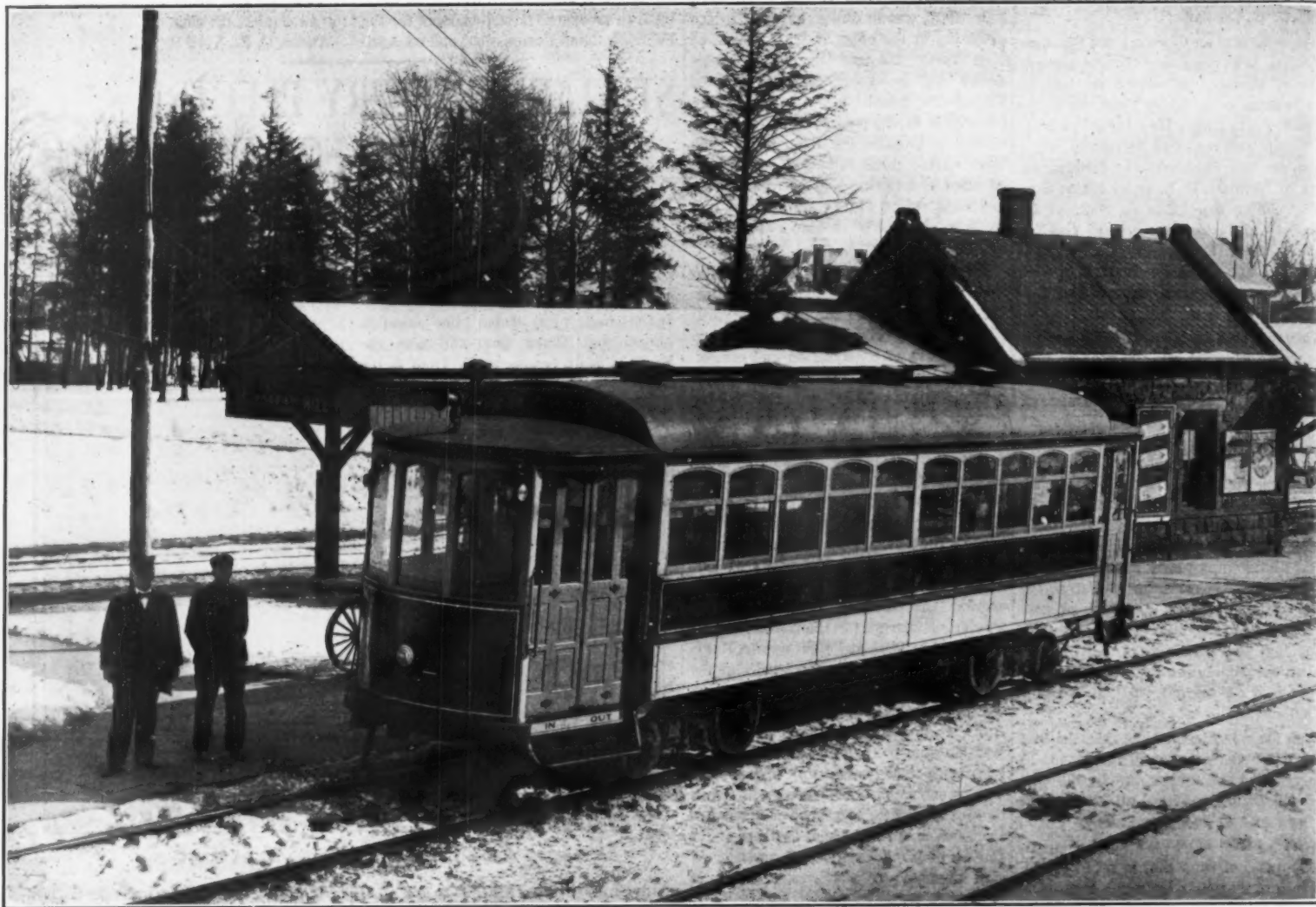
FIVE CELLS OF EDISON STORAGE BATTERY.

and contemplative railroad development in this section.

The cars are not an experiment in any sense, as the Long Island, Erie and Pennsylvania railroads have already bought them, and the cars are operating on the streets of New York, Philadelphia and

and for railroad service, and they are manufacturing at this time regular street cars and also larger cars for the steam roads, to be operated either as single cars or in two, three and four-car trains.

In the system now generally used of



BEACH CAR OPERATED BY EDISON STORAGE BATTERY

overhead trolley and bonded rails there is a constant loss of current, as well as a source of danger, and for a long time some other mode of propulsion has been sought and the necessity for a storage battery has been recognized, but on account of the fact that all storage batteries heretofore were composed principally of lead and acid they did not prove economically successful, as deterioration was constantly going on, whether the battery was in service or not, in addition to which the weight of the battery was also much against its use.

Something like 10 years ago Mr. Thomas A. Edison started to work to remedy these objectionable features of the storage battery. His idea was to get away from the use of lead and substitute a more durable material; in the place of acid use an electrolyte that would not corrode. After over 9000 experiments he succeeded in making a battery consisting essentially of an iron oxide contained in a steel receptacle in such a manner that it cannot escape, yet in such a form that it can freely give up its oxygen. Adjacent to this is a tube filled with layers of nickel oxide and finely divided nickel flakes, which act as a conductor, and an alkaline solution of water. By using these materials he has reduced the weight of the battery. This battery, after a service of five years, shows no deterioration of mutual efficiency.

These batteries are adaptable for use on cars and vehicles of every description, the smaller one for ignition and lighting and for small automobiles. As the batteries consist of a series of cells, the number may be multiplied to secure any horsepower required.

There are also being manufactured, in addition to the Beach cars, a line of vehicles known as the Lansden electric wagons, adapted to the use of these storage bat-

teries, and the Atlantic Ice & Coal Corporation of Atlanta, Ga., has bought \$30,000 worth of these wagons for delivering ice, etc.

Mr. W. H. Ragland and Mr. Geo. R. Collins of the Edison Storage Battery Equipment Co., Atlanta, Ga., are organizing the company to handle the Edison storage batteries, the Beach railway cars and the Lansden electric wagons in the South.

J. LOUIS SPENCER.

Appalachian Coal Operators.

The Southern Appalachian Coal Operators' Association will hold its next meeting at Chattanooga May 15-18. At the same time the Kentucky-Tennessee Retail Coal Merchants' Association and the International Fuel Association will also hold their annual conventions. These meetings will serve to bring together in Chattanooga the principal producers, shippers and retailers of coal in the Central South and also quite a number of representatives of coal machinery and equipment manufacturers. Every indication points to this being the most important gathering of Southern coal interests that has ever been held.

Carpets and Rugs.

Between 1899 and 1909 the value of carpets and rugs manufactured in this country increased from \$48,192,000 to \$71,954,000, or at the rate of 49 per cent. In the same period the value of carpets and rugs imported increased from \$1,759,566 to \$4,032,512, or at the rate of 129 per cent. The figures of domestic production do not include, according to the Census Bureau, operations of small establishments which make carpets and rugs from rags and old carpeting, but do include a few large mills which weave Colonial rag rugs on power looms.

The Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., April 24.

While all reports indicate that the iron market is in a very dull condition, yet the fact that shipments continue to keep pace with production is a grain of great comfort to the trade at this particular time. With the railroads staying out of the market for finished products, with the extra session of the Congress now considering the tariff and likely to place a number of finished products on the free list, and with the uncertainty that continues concerning the probable decision of the Supreme Court in the Standard Oil and Tobacco cases, it really is remarkable that the iron market should remain so firm as it has. Prices remain as they have for 10 months—seemingly fixed at \$11 Birmingham for No. 2. The buying the past week has been very light. Some iron is going to California now on a basis of \$11 for No. 2, competing there with the Chinese and Middlesboro brands. This business takes a freight rate of \$10 per gross ton to all Pacific coast terminals. Some basic iron has moved out at a figure equivalent to No. 2 foundry.

The pipe makers are confined in their sales to the West and far West, as the eastern portion of the country seems to be taking very little pipe of any kind now. Few large contracts are pending, and the business that is going on seems to be largely filling in orders. Shipments to a great degree apply on tonnages booked January and February last. Production remains about the same as it has been running for the last four months. There is no likelihood now of an increased rate of production without a material increase in the call for water and gas pipe. Quotations remain nominally, four to six-inch, \$22; 8 to 12-inch, \$21; over 12-inch, aver-

age \$20, with \$1 per ton higher for gas-pipe, these prices all being per ton of 2240 pounds on board cars at works here.

The Woodward Iron Co., Woodward, Ala., operating two iron furnaces there, has completed and put in operation its new by-product plant, consisting of 60 Koppers ovens, with plants for recovering the tar, ammonium sulphate, gas and other products.

No change is noticed in the old material situation for the week just closed. Buyers seem content to let affairs drift for a while longer without undertaking to at all force the situation. Not a large deal appears to have been made, and prices remain nominally as follows per gross ton f. o. b. cars here:

Old iron axles, \$14 to \$14.50.
Old iron rails, \$12 to \$12.50.
Old steel axles, \$14 to \$14.50.
No. 1 railroad wrought, \$12 to \$12.50.
No. 2 railroad wrought, \$9 to \$9.50.
No. 1 country, \$7.50 to \$8.
No. 2 country, \$7 to \$7.50.
No. 1 machinery, \$9.50 to \$10.
No. 1 steel, \$10 to \$10.50.
Tram car wheels, \$9 to \$9.50.
Standard car wheels, \$12 to \$12.50.
Light cast and stove plate, \$8 to \$8.50.

To Build Glass Works.

The Mountain Window Glass Co. of Coudersport, Pa., will build a 48-blower tank plant at Clarksburg, W. Va. This plant will be equipped for manufacturing window glass. It is being located at Clarksburg because of that city's supply of natural gas at low rates.

Wants to Buy Talc.

The Charles R. Fife Company of St. Louis wants to buy talc in the crude, delivered in carload lots.

CLIMATE AS AN ASSET FOR THE SOUTH.

"Papa, is Heaven divided like the United States into North, South, East and West?" asked a little girl from the South whose father had moved to the West.

"Why do you ask such a question," said the father.

"Because," answered the child, "if Heaven is divided that way I want to ask the good Lord when I go to Heaven to let me live in the South part."

The Georgia minister whose child asked this question found after a few years in one of the great cities of the West that though it was rich, and that though he was pastor of a great church, he, like his little girl, wanted to get back to the South part of the earthly Heaven. He heard the call which is sounding in the hearts of so many thousands of Southern people living elsewhere, "come home," and he is back in the South rejoicing in the blessed privilege of living in that section again.

The sentiment voiced by the little girl who had grown weary of snow and ice and blizzards, and longed to hear again the song of the mockingbird through the winter months, to see the flowers blooming at a season when her Western home was covered with snow, is finding expression in many hearts not only of those native to the South and who are hearing the call "come home," but millions of others who are beginning to learn that there is something more pleasant than the chilling blasts, the sweeping blizzards and the ice bound conditions which prevail over so large a part of the North and West for so many months of the year.

Some years ago those who crowded the South in winter to escape the snow and ice of the North were mainly people who, because of ill-health, were forced to seek a balmy climate. Some of them made mistakes and selected wrong locations. Some had reached that stage where even the most favorable climatic conditions could not bring back health and strength again. But there are today living in the South thousands of people who attribute the fact of their being alive to their having settled in the South. One cannot travel through Florida, for instance, without being impressed with the fact that many of the people that he meets went there as a last resort when doctors had given them up as beyond recovery. The man who travels the highways and the byways of Florida, who meets the orange grower, the trucker and the business man, will hear from many of those with whom he talks that their removal to Florida was to them the saving of life.

Stopping by the roadside one day to ask of a sturdy-looking orange grower the name of a very beautiful lake we were passing, he immediately commenced to tell of his enthusiasm of Florida, of the charm of its climate, and of the fact that a few years ago the doctors had told him in his mountain home in West Virginia that he could not possibly live through another winter. Among the numerous ailments that he named as dooming him to death were asthma, rheumatism and heart disease, and yet this invalid of a few years before seemed the embodiment of health and could not find words to fully express his joy at having discovered Florida. He had worked outdoors every day of the year except one, he said.

Another day, while visiting one of the most beautiful orange groves seen in the State, over on the West Coast not far from Tampa, we found a 75-year-old couple, sturdy, strong, healthy and happy,

with ideal conditions of life, with an orange grove burdened with ripening fruit, with a nearby lake which supplied ample water for irrigating purposes, with Jersey cows rivaling in milk and butter-producing qualities any to be found in the East. It was learned that over 30 years ago these good people had moved to Florida because the husband was supposed to have reached the last stages of pulmonary trouble.

A leading physician in Tampa, who has been enjoying the blessed privilege of living in that place for 16 years and is now the picture of health, said that he was sent South 16 years ago by his New Jersey physicians with the expectation that he was about to die, and that there was no hope for him, even in Florida.

Wherever one turns similar conditions are met. It may be that some go to Florida without finding the health they are seeking, but surely to many thousands living there that State has been the means of bringing them from the very gates of death to the joy of abounding health. And this is not surprising. There may be parts of Florida in which malaria is to be found; there may be parts in which swamps and lowlands produce dampness of climate. In a State 700 miles long it is not to be expected that every portion will be equally as attractive from the climatic point of view, from health conditions, or from that of the opportunities for success in agriculture or in business. But, broadly speaking, Florida is a State of wonderful potentialities.

The wandering Peri, as with enraptured vision he gazed into what he thought were the gates of Paradise, was looking not into the heavenly Paradise, not into the South as it exists today, but in his vision he doubtless saw the South of the future. He saw this section, which, with its superb advantages, is to be made a veritable Paradise. It is now in the making. It may be many years before it attains to the fullest fruition of all its potentialities. There are rough places that will have to be smoothed out in the process of making. The settler who goes to many parts of the South to establish himself in agriculture or in business will not find every condition paradisaical as he has been led to expect by some of the flamboyant advertisements that speculative land companies are filling the newspapers and the magazines of the land with. The seeker after health, looking to the South as the source of it, may find some disadvantages. Not every one will find health. Thousands will doubtless select the wrong spot, for climatic conditions very greatly vary in different parts of the South. What suits one case may not fit another. One may need the mountain air, another the warmer climate of Florida or the Gulf States. While these things are true, while the South is as yet a Paradise only in the making, nevertheless the range and variety of the South's climate is a national asset greater in value to the country than millions of acres of coal and iron ore and timber.

In its climate Florida, for instance, has an asset which for all time to come will pay dividends in health of mind and body to the millions of people who are destined to call that State their home, and to the millions who from year to year will during the winter season seek its balmy climate.

During the winter months, when the telegraph tells its tale of blizzards that are sweeping the North and West, of biting cold and deep snow, of blockaded railroads,

and of the suffering of thousands needing food and raiment and shelter from wintry blasts, the man who is fortunate enough, whether as visitor or as resident, to be in Florida is listening to the singing of the mockingbirds and enjoying the beauty of the blooming flowers. While inhaling the perfume of the orange blossoms he is gathering from the orange tree the ripened fruit, for as one crop of oranges is ripening the tree is full of blossoms for the next crop. Nowhere can one breathe a sweeter, softer air than in Florida, where during a very large part of the winter and spring months every day is as perfect as that rarest of things of which the poet writes, the perfect day in June.

The development of Florida as a resort or tourist place is as yet in its infancy. Not from its great phosphate beds, not from its timber wealth, not from its agricultural producing possibilities, but from its climatic advantages will the State reap its largest profit, because these climatic advantages will be a compelling force to draw to the State an ever-increasing number of tourists seeking to find a winter playground, of those who come for rest and quiet recreation, of others who come for health, and of many who will make Florida their permanent winter home, having reached that stage of life where wealth enables them to enjoy the opportunity of spending their winters permanently away from the cold and ice and snow of other sections. The climatic advantages would alone make Florida in the years to come a popular State of well-to-do people; but added to this condition will be the almost innumerable opportunities for profitable employment in fruit-growing, in trucking, in diversified agriculture, in employment in city pursuits which will come with the ever-expanding wealth and population of the State. It is a State of wonderful interest. In its semi-tropical foliage, so unlike anything else to be found in the United States; in its lakes and its even more wonderful springs big enough to form rivers, with its great stretch of sea coast, the Atlantic on one side and the Gulf on the other, Florida has rare advantages and attractions.

But Florida, richly endowed as it is, has no monopoly of climatic advantages. Along the Gulf coast of Alabama, Mississippi, Louisiana and Texas there are many places whose climate appeals to the Northern and Western man equally as strongly as that of Florida. Then the pine regions of the central South and the mountain regions of Carolina and Texas are by some preferred to the Gulf coast or to Florida. In the development of the tourist business and the capitalization of climatic advantages, the possibilities, not for Florida alone, but for a very large part of the South, are almost without limit. What has been done to attract people from less favored regions to this, the South Heaven part of our country, is as nothing compared with what should be done. What has been achieved in bringing into this favored region the permanent settler and winter visitor is as nothing compared with what will be achieved when the situation is properly handled.

To Manufacture Clarifiers.

The Sanford Clarifying & Separating Co. has been organized with a capital stock of \$2,500,000 for the purpose of manufacturing a cane juice, syrup and molasses clarifier invented by George E. Sanford of Covington, La., who is first vice-president of the company. The latter has offices at 81 Wall street, New York, and Frank Schaffer of the National City Bank of New York is president. William C. Eakins of 37 Wall street, New York, is second vice-president and Alfred E. Saurel is secretary-treasurer.

TO GET FOREIGN TRADE.

Observations in the East of an American Manufacturer.

Mr. William C. Redfield, second vice-president of the American Blower Co. of Detroit, Mich., left America last November for a trip around the world to study foreign markets with a view to increasing the export business of his company. A letter from him to his company written in March at Calcutta presents some striking facts of interest to American manufacturers and merchants desiring to extend their foreign connections. Mr. Redfield writes.

"I have now traversed Japan, the Philippines, Hongkong, Java, the Straits Settlements and Burma to India. This covers the possessions of the United States, Holland and Great Britain in the East, as well as Japan. I cannot say that thus far I have found any prejudice against American goods. Indeed, certain classes of American products have been everywhere in evidence. Among these are sewing machines, typewriters, toilet articles and soaps, locomotives (in Japan), petroleum products and others. These are precisely those that have been most carefully and steadily brought before and kept before the attention of buyers in these various lands. I ought also to add that American cameras and photographic supplies were everywhere except in Java; there no films of any kind could be had, only plates. In many stores finding one article selling I would ask why not such and such another, only to find simply that they did not know of it, and in some cases to have a note at once made of it.

"I have run across horrible neglect in packing, even after attention was called to it. In one case oil stoves were formerly bought in America and the American product was conceded better, but after warning the American goods were so badly shipped that one-half of one shipment arrived broken. Now the dealer buys in Europe and pays a higher price. He told me he did not want to do this, but he had to, for American makers would not listen to him.

"Bitter complaint is made that American houses trust young irresponsible boys to do their mailing, instead of having some clerk of fair responsibility attend to this important service. The result is misaddressed letters, so that responses are not received, and the regular habitual neglect to prepay postage causing extra charges.

"A large Boston house wrote to Manila June 8, and on June 25 followed it up with a sharp letter insisting on an immediate reply. A New York firm referred an inquiry from Panama to its Manila agent. These are some of the things that handicap Americans.

"I do not find prices to be the obstacle. Several American manufacturers I have met tell me their prices are lower than their European competitors. This is true of locomotives, for example.

"What I find chiefly needed to greatly enhance our export trade in America is knowledge—knowledge of geography, of the peoples, their ways and needs—their business methods.

"Foreign trade does not essentially differ in its basis from domestic trade. A man selling in Michigan studies Michigan needs, offers goods Michiganders want, tells about them in the way the good people of Michigan understand. If he does not do so the wise ones in Michigan turn him down. A man in larger trade does not assume that Texas and Florida use the goods that sell in Maine. He finds out what are wanted or not wanted, and acts accordingly. You don't spend much on heating apparatus for Louisiana, and this is all there is underlying export trade, but

because it is just outside the immediate horizon and men are busy, they often do not even inquire about it, and when they do and find that it takes time and care and patience they take the near and obvious and let the other go. In this way the trade of empires is neglected and great opportunities are lost. Sometimes houses 'peter out' and give up the game too soon to win. Two concerns came from America to India, where the prejudice, not so much against American goods as in favor of English goods, is very strong. One after six months began to reduce expenses, took a smaller office, then a still smaller one, then closed up. The other lost \$20,000 the first year; they had a good man on the spot and held on. The second year they came out even. The third year they got back the \$20,000. Then they got it back many times with interest, for they had means and courage to stand the gaff."

Texas Real Estate Men.

The Texas State Realty Association was organized last week at San Antonio with Hall P. Street, San Antonio, president; Wycliffe A. Hill, Houston, secretary; H. E. Dickinson, San Antonio; E. F. Lanham, Temple; G. D. Staples, Houston; N. R. Lowry, Austin, and H. C. King, San Antonio, vice-presidents, and W. L. O'Brien, Louise; G. M. Daniels, Laredo; H. K. Orgain, Temple; E. H. Wynne, Temple; C. V. Brown, Port Lavaca; D. L. Graham, Austin; A. S. Thivest, Austin; H. V. Burns, Austin; G. H. Freeling, Houston; G. Glen Nichols, Houston; Frank B. Earnest, Cotulla; R. G. Callahan, San Antonio; John Strohm, San Antonio; B. F. Nicholson, San Antonio; R. H. Webster, San Antonio; W. A. McDuffe, San Antonio; T. L. Conroy, San Antonio; D. J. Woodward, San Antonio; P. C. Woods, San Antonio; E. P. Eastburn, Houston, directors.

Electric Exhibit.

In connection with the seventh annual convention of the Southwestern Electrical and Gas Association this week at Houston, Tex., an exhibit of electrical apparatus and appliances will be held. Among the exhibitors are Atlas Railway Supply Co., Chicago, Ill.; Brown-Woods Electric Co., Houston; Dickson Car Wheel Co., Houston; Electric Service Supplies Co., Chicago, Ill.; Home Telephone Co., Houston; General Electric Co., Dallas; Houston Electric Light & Power Co., Houston; John A. Roebbling's Sons Company, New York; Southwestern Telegraph & Telephone Co., Houston; Texas Company, Houston; Houston Car Wheel & Foundry Co., Houston; Westinghouse Electric & Manufacturing Co., Dallas; Randall, Love, Grove & Wyman Company, Houston; Simple Electric Heating Co., Cambridge, Mass.; Wayne Electric Co., St. Louis, Mo.; L. A. Bennett Company, Chicago, Ill.; Crocker-Wheeler Company, Ampere, N. J.

Arkansas Land Drainage Systems.

Arkansas County Court, De Witt, Ark., has awarded contract for two ditches, one to drain 18,823 acres of land in Morris and other townships, and the other to drain 5049 acres of land in Crockett township. The first-mentioned ditch will cost about \$37,380 and the second about \$7870. For the large ditch contracts have been awarded in allotments to J. W. Wright and T. W. Keaton, L. B. Capps and M. Rollison, and L. P. Bracy. For the small ditch the contract has been awarded to A. A. Tindall and C. F. Prange. These two ditches will greatly improve and increase Arkansas' rice farming, besides adding to its cultivation of cotton, oats, corn and potatoes.

THE AUTOMOBILE INDUSTRY.

The 1909 Output Forty Times as Great as That of Ten Years Ago.

Washington, D. C., April 25.

A preliminary statement showing the results of the Thirteenth United States Census for the year 1909 of establishments manufacturing automobiles was issued today by the Director of the Census, E. Dana Durand. It presents a comparative summary of the censuses of 1909, 1904 and 1899; an enumeration of the number, value, power and horse-power rating of gasoline, electric and steam automobiles, and also comparative general statistics showing the rapid growth of the automobile industry. It was prepared, under the direction of William M. Stewart, chief statistician, by Emil P. Secker, expert special agent. The figures are preliminary and subject to such changes as may be necessary after further examination of the original reports.

The reports from the establishments were taken for the calendar year ended December 31, 1909, wherever the system of bookkeeping permitted figures for that year to be secured, but where the fiscal year of an establishment differed from the calendar year a report was obtained of its operations during the fiscal period falling most largely within the calendar year 1909.

The automobile industry has had a most remarkable development in recent years. The number of establishments increased from 57 in 1899 to 316 in 1909, an increase of 454 per cent. in the 10-year period. Of the 316 establishments in 1909, 265 manufactured automobiles as a main product, while complete machines were a minor product, or "side line," with 51 of the establishments.

Automobiles—Comparative Summary, by States; 1909, 1904 and 1899.

| State. | Census. | Number of establishments. | Value of all products. | Number. | Value. | Automobile parts and repairs. | Per cent. of increase in value of all products. |
|----------------------|---------|---------------------------|------------------------|---------|---------------|-------------------------------|---|
| Michigan..... | 1909 | 43 | \$80,330,000 | 61,921 | \$70,519,600 | \$9,810,300 | 1067 |
| | 1904 | 23 | 6,884,200 | 9,130 | 6,500,300 | 323,900 | ... |
| | 1899 | (*) | (*) | (*) | (*) | (*) | ... |
| Ohio..... | 1909 | 29 | 29,659,800 | 14,429 | 23,724,700 | 5,935,100 | 406 |
| | 1904 | 19 | 5,928,100 | 2,935 | 5,336,900 | 591,200 | 3988 |
| | 1899 | 3 | 145,000 | 122 | 145,000 | ... | ... |
| Indiana..... | 1909 | 46 | 21,817,600 | 17,484 | 17,728,500 | 4,089,100 | 1126 |
| | 1904 | 12 | 1,779,800 | 1,217 | 1,612,900 | 166,900 | ... |
| | 1899 | (*) | (*) | (*) | (*) | (*) | ... |
| New York..... | 1909 | 34 | 20,996,700 | 8,108 | 17,638,100 | 3,358,600 | 442 |
| | 1904 | 27 | 3,874,200 | 1,828 | 3,153,400 | 720,900 | 759 |
| | 1899 | 15 | 455,900 | 521 | 374,900 | 81,000 | ... |
| All other States.... | 1909 | 164 | 41,918,500 | 22,337 | 35,504,200 | 6,414,400 | 363 |
| | 1904 | 87 | 9,058,000 | 7,720 | 7,966,900 | 1,091,000 | 118 |
| | 1899 | 39 | 4,147,100 | 3,070 | 4,028,200 | 118,900 | ... |
| United States.... | 1909 | 316 | \$194,722,600 | 127,289 | \$165,115,100 | \$29,607,500 | 608 |
| | 1904 | 168 | 27,524,200 | 22,830 | 24,630,400 | 2,893,800 | 490 |
| | 1899 | 57 | 4,748,000 | 3,723 | 4,548,100 | 199,900 | ... |

*Included in "All other States."

Includes establishments distributed as follows: California, 6; Colorado, 2; Connecticut, 10; Georgia, 1; Illinois, 35; Iowa, 11; Kansas, 3; Kentucky, 1; Maryland, 4; Massachusetts, 17; Minnesota, 6; Missouri, 19; Nebraska, 3; New Jersey, 8; Oklahoma, 1; Pennsylvania, 19; Rhode Island, 2; South Dakota, 1; Tennessee, 4; Texas, 1; Virginia, 1; Washington, 1; Wisconsin, 16.

Includes establishments distributed as follows: California, 7; Colorado, 1; Connecticut, 8; Georgia, 1; Illinois, 13; Iowa, 1; Kansas, 1; Maine, 1; Massachusetts, 16; Minnesota, 3; Missouri, 3; Maryland, 1; New Hampshire, 2; New Jersey, 6; Pennsylvania, 11; Rhode Island, 3; Virginia, 1; Wisconsin, 8.

As shown in the foregoing table, the total product of the automobile industry increased in value from \$4,748,000 in 1899 to \$194,722,600 in 1909, an increase of 4001 per cent. The value of products stated represents the product as actually turned out by the factories during the census year, and does not necessarily have any relation to the amount of sales for that period of time.

A striking fact is the consistent development of the automobile industry in the States in which the carriage and wagon industry was of great importance. The inference is that, in a large measure, these States were equipped with the necessary skilled labor, thus giving the automobile industry an advantage and an impetus not enjoyed by other States.

The number of automobiles manufactured increased from 3723 in 1899 to 127,289 in 1909, or 3319 per cent. Of these, 126,570 were built in establishments of which automobiles were the main product, and 719 in establishments of which such machines were merely minor products.

In addition to the four States shown in the foregoing table, among which Michigan led by a great preponderance, represented by about 45 per cent. of the total product, the industry was of importance in the following States, arranged in ranking order: Connecticut 2955 machines, valued at \$7,405,900; Wisconsin 5641, valued at \$7,157,500; Massachusetts 3467, valued at \$6,232,700; Illinois 3453, valued at \$4,485,500; Pennsylvania 2001, valued at \$4,151,300, and Missouri 728, valued at \$1,074,300.

California, Maryland, Iowa, New Jersey, Minnesota, Colorado, Kansas, Kentucky, Nebraska, Oklahoma, Rhode Island, South Dakota, Tennessee, Texas and Georgia had a combined product of 4092 machines of the value of \$4,907,000.

In the table below are interesting figures showing in compact form, for the years 1909 and 1904, the number of establishments and the number and value of machines, with per cent. of increase, and also the number and value of the machines classified as gasoline, electric and steam:

Number and Value of Machines, by Kind of Power, and Per Cent. of Increase; 1909 and 1904.

| Item. | 1909. | 1904. | Per cent. of increase. |
|-------------------------------|---------------|--------------|------------------------|
| Number of establishments..... | 316 | 168 | 88 |
| Machines: | | | |
| Number..... | 127,289 | 22,830 | 458 |
| Value..... | \$165,115,100 | \$24,630,400 | 570 |
| Gasoline— | | | |
| Number..... | 121,274 | 19,837 | 511 |
| Value..... | \$155,068,100 | \$20,416,100 | 658 |
| Electric— | | | |
| Number..... | 3,639 | 1,425 | 155 |
| Value..... | \$6,564,500 | \$2,496,300 | 161 |
| Steam— | | | |
| Number..... | 2,376 | 1,568 | 52 |
| Value..... | \$3,482,500 | \$1,688,000 | 106 |

The table following shows that the use of the automobile as a pleasure vehicle is as yet far more general than for strictly business or commercial purposes. It must be remembered that a very large number

are given under the class of "foundry and machine shop products."

ports are given under the class of "foundry and machine shop products."

The Importance of Iron.

At the annual meeting of the Cleveland (Ohio) branch of the National Metal Trades Association President C. O. Bartlett, of the C. O. Bartlett & Snow Company, in alluding in his annual report to the pleasant relations between employers and employees in the city, said that there was only one way to deal with the so-called labor question, and that is, always to show a fair hand. He dwelt upon the importance of Cleveland as the greatest manufacturing city in the State, and said:

"Our business, that is, the iron business, leads all others. We are doing as much or more than any line to advance the Commonwealth and to build up our city, a State and nation. We can well afford to be proud of our work, and I for one am proud of it."

"Let us consider for a moment what a ton of iron represents and the work necessary to produce it. It takes 4221 pounds of ore, 2310 pounds of coke, which means practically 3000 pounds of coal, and 1147 pounds of limestone, a total of over four tons of ore, coal and limestone to produce this ton of pig-iron. The ore must be mined and hauled to the boats, then transported to the furnaces, requiring an army of workmen, to say nothing of our won-

Automobiles—Number of Machines, Classified by Horse-power Rating; 1909.

| | | Horse-power. | | | | | | |
|-------------------------------|---------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--|
| Class. | Total number. | 10. 10 but less than 20. | 20. 20 but less than 30. | 30. 30 but less than 40. | 40. 40 but less than 50. | 50. 50 but less than 60. | 60 or more. | |
| Pleasure and family vehicles. | 122,505 | 7,217 | 27,907 | 33,905 | 50,488 | 3,069 | 29 | |
| Buggies..... | 4,582 | 482 | 3,705 | 339 | 56 | | .. | |
| Runabouts..... | 36,496 | 4,538 | 17,818 | 10,933 | 3,043 | 157 | 7 | |
| Touring cars..... | 76,433 | 177 | 5,415 | 21,878 | 46,117 | 2,825 | 21 | |
| Closed..... | 3,968 | 1,571 | 855 | 729 | 749 | 63 | 1 | |
| Other varieties..... | 1,026 | 449 | 14 | 26 | 522 | 14 | .. | |
| Public conveyances..... | 1,428 | 19 | 639 | 537 | 207 | 44 | .. | |
| Cabs..... | 1,203 | | 627 | 521 | 55 | | .. | |
| Omnibuses..... | 225 | 19 | 3 | 16 | 152 | 41 | .. | |
| Government, municipal, etc. | 68 | 5 | 2 | 12 | 23 | 16 | .. | |
| Ambulances..... | 32 | 5 | 2 | 6 | 17 | 2 | .. | |
| Patrol wagons..... | 36 | | | 6 | 16 | 14 | .. | |
| Business vehicles..... | 3,288 | 310 | 1,218 | 926 | 729 | 105 | .. | |
| Delivery wagons..... | 1,875 | 264 | 884 | 628 | 98 | 1 | .. | |
| Trucks..... | 1,401 | 46 | 330 | 297 | 627 | 101 | .. | |
| Other varieties..... | 12 | | 4 | 1 | 4 | 2 | .. | |
| Total..... | 127,289 | 7,542 | 29,657 | 35,390 | 51,457 | 3,224 | 29 | |

There is a perceptible general trend in the automobile industry toward specialization, which is manifested in a marked de-

derful steamships, many of which are constructed in Cleveland, and in which hundreds of millions of money are invested.

"The coal must first be mined and taken to the ovens, and again transported to the furnaces, all of which requires much labor and transportation. Ohio last year produced practically 30,000,000 tons of coal, or more than the entire amount produced in European Russia, and more than ten times the value of all the gold produced in South Dakota, including the great Homestake mine, the largest in the world.

"The limestone is quarried in the Ohio quarries and transported to the furnaces, all of which requires much labor and transportation facilities. There is one company in this city that is now shipping more than 100 carloads of limestone products per day from its quarries at Marblehead and Kelley Island.

"From the furnaces the iron takes many different courses. Much of it is made into castings, which, in turn, go through the machine shops and are fabricated into 10,000 different kinds of materials. There are nearly 4000 men pouring iron every day in the city of Cleveland. Much of it is taken, while still in a molten state, and converted into steel again, to be worked into nuts, bolts, wire and 10,000 other things. They are now making in this city, at the Cuyahoga works of the American Steel & Wire Co., sheet wire six inches wide and 18 gauge. This product is then distributed throughout the United States and world and transformed into all kinds of valuable things, such as buttons, dishes, automobile parts, kodak films, telescopes, typewriters and very many other useful articles, all of which requires an immense amount of labor. Some of this same product is drawn through diamond dies into wire by the same company at its Worcester (Mass.) plant, so fine that a small spool not larger than one's finger contains a mile of it. Other parts are made into different kinds of machines and sold throughout the world. Over \$8,000,000 worth of typewriter machines were exported from the United States last year to foreign countries. Great quantities of steel are made into iron nails and tacks; in fact, it is possible to procure in Cleveland today one pound of tacks, numbering 21,000, for the sum of a few cents. Thousands upon thousands of tons of steel are used in the construction of large buildings and reinforcing cement. A few years ago we began to think that this was going to be the cement age; that iron would be displaced by cement; but we have found that it is next to impossible to make a large building or bridge or foundation without using a very large amount of iron for reinforcing same.

"The above facts simply give an idea of what is being done here, and of which we are necessarily a part and parcel.

"It seems to me as though there was one thing lacking in our city among the different manufacturers, and that is, co-operation. When a customer comes to your place of business and desires to purchase something that you do not make, then you ought to see that he is taken to the other fellow who does make it, even though he may not be a member of our association."

Atlanta Hydro-Electric Power Co.

The Atlanta Hydro-Electric Power Co. 1014 Candler Building, Atlanta, is completing its plans with a view to beginning construction at an early date on its proposed water-power-electrical plant on the Toogala River. Louis B. Magid, president of the company, writes the MANUFACTURERS RECORD that the total cost of the plant is estimated at \$3,000,000, to include the construction of a high dam and powerhouse, the installation of machinery for developing 30,000 horse-power, and the construction of a transmission line to Atlanta.

INDUSTRIES WANTED BY SOUTHERN COMMUNITIES

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors, homeseekers and manufacturers. Communications of 200 or 300 words are likely to be given prompter publicity than more extended ones.

GREENWOOD'S ATTRACTIONS.

Board of Trade,
Greenwood, S. C., April 15.

Editor Manufacturers Record:

Possibly no town or city in the whole South of like size is attracting more attention or receiving more inquiries from prospective citizens than the town of Greenwood, the county-seat of Greenwood county, South Carolina. Situated in the great Piedmont section, located on the Seaboard Air Line Railway between Monroe and Charlotte, N. C., on the one side, and Atlanta, Ga., on the other, on the Southern Railway, Columbia & Greenville division, on the Charleston & Western Carolina Railway, and also being the terminus of the G. S. & A. trolley line, Greenwood offers the best of shipping facilities to wholesalers, jobbers and manufacturers.

This is a young town, having grown from a small village of 15 years ago to a prosperous and progressive town of 7000 inhabitants. The suburban territory is rapidly developing, and is keeping pace with the town, giving the business interests a trading population of 20,000.

In Greenwood there are five large cotton mills; in the county, seven. These are all strong mills and doing a good business and in good condition. Various other manufacturing plants are thriving, such as lumber mills, fertilizer factories, cottonseed-oil mills, ice factory, machine shops, iron foundry, bottling plants, overall factory and many others of this type. At present the Board of Trade is at work on several other large concerns, and it may be predicted with a degree of certainty that several of them will be located within a short time. Greenwood is destined to become a large manufacturing center; every indication is such, and all advantages are offered. That this is a good wholesale town is evidenced by the fact that there are at present three large wholesale groceries, three fruit and produce wholesalers and a number of jobbers doing a good business. Excellent opportunities are offered for a wholesale dry goods business, and equally as good an opening for a wholesale shoe store. We are very much interested in these lines, and hope to be able to report the establishment of same at an early date. Students of the map can readily see what Greenwood offers in this line of endeavor.

Greenwood has the Connie Maxwell Orphanage, a Baptist institution under the control of the South Carolina Baptist Convention; Lander Female College, a Methodist college for young ladies; the Oregon Hotel; the Southern Cotton Oil Co. ginners; municipal ownership of a very prosperous and up-to-date system of water, lights and sewerage, water furnished by artesian wells. The town is the distributing center for many of the other towns and cities of this section. It is a place where there is work and a chance for good citizens. More than \$1,000,000 worth of improvements were made in 1910, and 1911 has made a most excellent beginning.

At present work is progressing on the new Seaboard Air Line depot, the new

Episcopal church, a large wholesale house, the Panola Cotton Mill, the G. S. & A. trolley line, the industrial building at Connie Maxwell Orphanage, a large number of residences, etc. Plans are being made or contracts let for the following new buildings: The hospital, South Main Street Baptist Church, a new dormitory for Lander College, a new Sunday-school room for the First Baptist Church, a new building at the Orphanage, depots and terminals for the trolley line, a number of new residences, etc.

If interested in a "better place to live," look us up on the map, pay us a visit, call on us for information and assistance. If you are a good citizen and want to live in a good town, then come to Greenwood. We shall be glad to have you.

S. BROOKE MARSHALL,

Secretary.

ACTIVITY AT WHEELING.

Board of Trade,
Wheeling, W. Va., April 22.

Editor Manufacturers Record:

On Tuesday, Wednesday and Thursday, May 9, 10 and 11, the Wheeling Board of Trade will run its annual trade excursion. About 100 of our leading wholesale and retail merchants will be on the special train of three sleepers and a diner, which will leave the local station Tuesday morning over the B. & O. R. R., and which will consume three days in visiting various towns in Eastern Ohio and Northern West Virginia, making 36 towns in all and covering 650 miles. This is our fourth annual excursion, and our merchants report profitable results from the previous trips.

The Board of Trade the past year has been working on plans to secure a new auditorium for this city, and at a recent meeting of the City Council an ordinance was passed granting them the right to build a combined market-house and auditorium on the site of the present second ward market-house. At a meeting of our special committee which has this matter in charge work was started on the formation of a \$160,000 stock company to be known as the Market-Auditorium Company. Work will be started at once on the sale of the stock for this company, and it is hoped that construction will be started on the building at an early day. The undersigned was elected temporary secretary-treasurer of the new company, and Mr. Fred F. Faris of this city is the architect. The auditorium will seat 3500 people and will be the largest hall in the State and the finest building of this character in the Ohio Valley.

At a recent meeting the Council decided to submit to the people the question of a bond issue to the amount of \$300,000 for the installation of a modern filtration plant, which will give the city a good supply of pure water. The city is also making preparations for more paving and for making other needed improvements during the coming summer.

Our many industries are nearly all running in full, and the Wheeling district is enjoying an era of prosperity which increased our bank clearings from \$80,000,000 in 1909 to \$101,000,000 in 1910, and I

think 1911 will even surpass last year, which was a splendid showing for a city of this size.

A new gas field has been discovered just north of the city, and within the past few weeks a number of wells producing from 3,000,000 to 5,000,000 cubic feet daily have been drilled in, and more will come in in a few days, assuring us of a plentiful supply of the cheapest and best fuel on earth for many years to come.

The Board of Trade offers free sites to reliable concerns seeking locations, and we would be glad to receive communications from anyone wanting to know the many and varied advantages of Wheeling for the merchant, manufacturer and homeseeker.

R. B. NAYLOR,

Secretary.

FOR WOODWORKING.

Greenwood, Miss., April 15.

Editor Manufacturers Record:

Greenwood, the industrial center of the hardwood district of Mississippi, has made marvelous strides in the last 10 years, with its increase of population of over 200 per cent.

It is a city that is rapidly becoming a distributing point for this section of the South, and offers many avenues of trade for the jobber, and is an ideal location for woodworking factories, especially those manufacturing wood novelties. It also presents virgin territory for a cigar factory, cotton mill, mattress factory and many other manufacturing plants. Greenwood has seven branches of railroad, besides river transportation, which insures low water rates. Greenwood's banks have resources of about \$4,000,000, which, from a financial standpoint, has placed it in the front rank of the cities in Mississippi. Greenwood has a splendid road system, and is contemplating the building of 100 miles of macadamized road. Much Northern and Eastern capital is being invested in Greenwood, owing to the very attractive returns possible, to the splendid quality of its citizenship, to the high plane of morality and natural beauty of the city.

The Greenwood Business League, the business organization of the city, is one of the largest in the South, and is thoroughly equipped to give all information desirable to any manufacturer, jobber or individual that wishes to come to this city of great opportunity.

M. V. RALEY, Secretary.

FORT SMITH INDUSTRIES.

Commercial League,

Fort Smith, Ark., April 20.

Editor Manufacturers Record:

Fort Smith has thus far had a most successful 1911, and all conditions point to the remainder of the year being the best in her history.

The Three "B" Duster Co., formerly of Buchanan, Mich., has just completed its frame factory building of 10,000 square feet floor space, and is now working over 25 employees.

The Arkansas Refining Co. has also just commenced the refining of crude oil and its plant probably represents \$20,000.

The owners of the new Fort Smith Garment Co. have arrived at Fort Smith from Celeni, O. They are busily engaged in installing the machinery for their new overall factory, which will start 25 employees and expect to be employing 50 as soon as their help can be educated.

The contract will soon be let for the construction of the brick factory building of 40,000 square feet floor space to be occupied by the carriage factory of the Garden City Buggy Co. They are removing from Garden City, Mo. The new plant

will have a capacity of 3000 vehicles annually and employ 40 skilled workmen.

The City Council has passed ordinances which will insure the closing of certain streets and paves the way for the early erection of the union depot on Rogers avenue, which will be owned by the Kansas City Southern Railway, and will also be used by the Frisco, Fort Smith & Western and the Midland Valley lines.

Our factories are all of them operating full time, and are having a most excellent season's business. Seven different manufacturers, representing as many Northern factories, have personally visited Fort Smith at the invitation of the Commercial League since March 15, and all of them went away more than pleased with the manufacturing outlook of the city, and all of them submitted definite propositions to the Commercial League and active negotiations are being carried on with a view to securing the location of these industries. From present conditions it can confidently be stated that at least three or four of these factories will finally decide to locate here.

Over \$25,000 worth of stock has been subscribed to the Arkansas-Oklahoma Fair Association, and work will soon commence upon the grounds.

H. G. SPAULDING,
Manager.

TO BEAUTIFY HOUSTON.

Bureau of Publicity,
Houston, Tex., April 18.

Editor Manufacturers Record:

The greatest civic improvement movement ever launched in Houston has been inaugurated by the Chamber of Commerce, aided by the city administration. The Chamber of Commerce and the city administration have jointly made appropriation for city beautification work which will extend throughout the city. The appropriations were made immediately available, and work on the various projects outlined began at once.

The movement was the outgrowth of an experiment conducted for a month by the Chamber of Commerce. M. A. Pottenger, a city beautifier of San Francisco, was commissioned by the Chamber of Commerce to seek the transformation of a certain spot on Buffalo Bayou, near the Central Station, which was conspicuous mainly because of its ill-looking appearance. For the work on this site the Chamber of Commerce appropriated \$500.

A month later the transformation was complete. From a mass of underbrush and debris with the edges of the banks and the surface of the water topped with scum and filth, the site was changed into a cozy little park, sodded in green grass, with ferns, shrubs and plants interspersed, and with a sidewalk leading along the edge of the stream to steps leading down from the bridge.

So successful was the experiment that it was decided to extend the campaign. A committee from the Chamber of Commerce called on Mayor Rice to inform him of the success of the test. The Mayor responded by subscribing for the city \$5000, with the Chamber of Commerce appropriating an equal amount.

Five blocks of Buffalo Bayou, from the head of navigation at the foot of Main street to the municipal water-works, will be embraced in the first work of the campaign. It is the plan to convert the whole into a public park, while eventually the present steel bridges will give way to classic concrete arch structures, which will lend beauty to the scene.

Throughout the city the work will be extended, additional shade trees being put out in the streets and avenues, while "community lawns" are to be laid out to extend through entire blocks. A tree nursery will

be established outside the city and young trees grown for transplanting in the city when the exigency demands. Every business organization and club in Houston is behind the movement for a city beautiful, and by contributions of flowers and trees will greatly aid the movement.

JEROME H. FARRAR,
Manager.

PROGRESSIVE BRISTOL.

Board of Trade,
Bristol, Tenn.-Va., April 18.

Editor Manufacturers Record:

At the annual meetings of the Bristol Board of Trade and the Greater Bristol Club, locally known as the Boosters, last night the secretary showed that the gross business of Bristol, taken from actual book accounts of firms and corporations, had increased \$4,806,495 during the year ended March 1, 1911, over the previous 12 months.

The bank deposits for a like period showed an increase of over \$318,000, or an average increase in deposits of 17.7 per cent., and these deposits were in the face of the sum of \$1,232,665 that had been put into new buildings, machinery, equipment, grounds and raw material and stocks of the several new industries and jobbing houses that began their history in Bristol during the year 1910. From actual returns the payroll in manufacturing plants in Bristol which made report to the Board of Trade increased in 1910 \$498,683 over a like period in 1909.

The revenues to the passenger department of the railways amounted to \$332,639, an increase of \$40,490 over 1909. Freight receipts showed an increase of \$158,810. In statistics governing the car movements, Bristol proper, the increase in inbound cars for 1910 over 1909 was 8900 cars and the outbound movement showed an increase of 7465 cars.

It was decided that July 3 and 4 be set aside as a homecoming time in Bristol to attract back home the thousands of valuable citizens who have strayed away from Southwest Virginia and East Tennessee.

During the year ended March 1, 1911, Bristol expended \$325,227 in streets, public schools and other departments of government, and Sullivan county, in addition to \$200,000 already expended on highways, has on hand at present \$113,000, which will go into macadamized roads this spring and summer, all leading into Bristol. There is a very decided movement on to have Sullivan County Court take advantage of the Legislature authorizing an issue of \$100,000 bonds in addition to the \$113,000 at present on deposit. Washington county, Virginia, during 1910 spent \$150,000 on public highways, and by agreement last month between county and city \$48,000 was set aside for connecting with three trunk pike roads leading to the northern portion of the county.

The following officers of the Board of Trade were elected: Henry Roberts, president; E. W. King, vice-president, and Messrs. N. B. Remine, John A. Mahoney, J. Spears Webster, C. J. St. John, J. C. Bayless, H. E. Jones, J. D. Mitchell, J. L. C. Smith, H. P. Wyman, S. G. Turnbull, C. L. Baumgardner, C. M. Brown, J. W. Lynn, W. R. Stone and S. S. McCormick, directors.

The new president of the Greater Bristol Club is C. L. Baumgardner, agent of the Norfolk & Western Railway; vice-president, J. F. Davis; secretary, Jesse L. Nave.

F. M. RUNNELS,
Secretary.

WANTS MORE FACTORIES.

Chamber of Commerce,
Longview, Tex., April 18.

Editor Manufacturers Record:

On April 11 the city of Longview voted a bond issue of \$90,000 for paving business

streets, for modern lighting facilities, etc.

The city recently gave 80 acres of land to be used for terminal shops, a right of way 10 miles to the county line and a subscription of \$7500 in cash for an additional railroad.

Work will soon begin on a \$20,000 building for the First Baptist Church, Rev. J. C. Hughes, pastor.

E. A. Blount of Nacogdoches and J. C. Turner, Sr., of this city plan to erect a few modern business houses in this city, and Dr. W. B. Northcutt will soon begin work on a two-story brick business house.

We want more factories.

LUTHER ELLISON,
Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 82 and 83, and under "Cities, Towns and Railroads Inviting Factories" on pages 112, 113, 114 and 115.

GULF COAST EXPOSITION.

Proposed Permanent Industrial Exhibit at Houston.

[Special Cor. Manufacturers Record.]

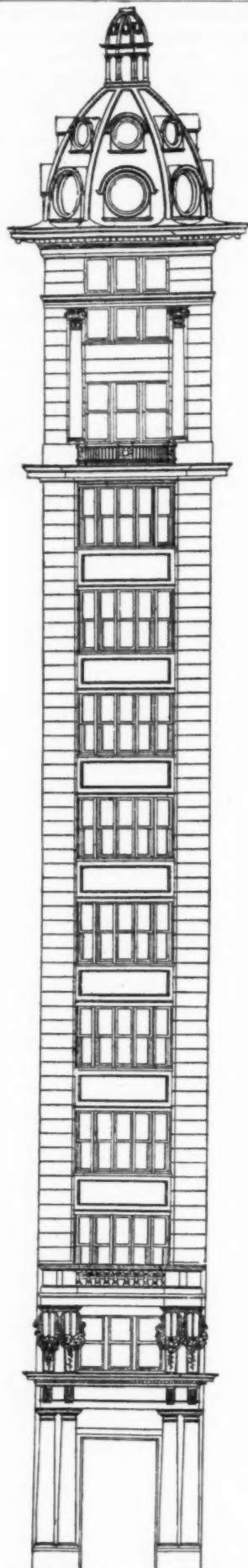
Houston, Tex., April 20.

The Gulf Coast Exposition at Houston is the name given to the latest idea for an industrial exposition, Max Rosen, general manager. It will comprise over 70 acres of land, advantageously situated with respect to transportation facilities, being served by 12 steam railroads, two traction lines and by a canal leading to the Gulf of Mexico. Within this enclosure it is proposed to erect eight main structures, of concrete, to be used exclusively for exhibition purposes, each building being 70x150 feet. They will be arranged in circular formation, with two large shelled walks surrounding them, one on the inner circle and the other on the outer circle. Each walk will be 100 feet wide. By the arrangement additional structures of similar character and size can be introduced should the business demand it, yet without at any time destroying the architectural theme or contour now designed, thus preventing the hodge-podge of constructions generally found in agricultural fair grounds.

It is the intention of the management to maintain permanent industrial exhibits, and at stated periods introduce special trade exhibitions, as is held in the cities of the North. In operating the permanent exhibition three buildings will at once be devoted for that purpose, although it is anticipated that the railroads alone would require that much floor space, the various Texas railways by this means maintaining exhibits of such products as are to be found along their respective systems. They now expend vast sums annually in exhibitions in the larger cities, and when such expositions are over pack their products away in packing cases until some other opportunity presents itself to again bring them forth.

Houston appears to be a logical point for such an exposition, as the center of the rice, lumber, cotton, oil and agricultural interests, together with the many mineral and metal resources yet untouched by the hand of man, and it is expected not only to attract attention from the entire country, but show to the whole world the resources of Texas and the Gulf coast country. Many of the largest cattle ranches are to be found within the territorial boundary lines of the Lone Star State, timber lands second only to California, and agricultural pursuits rapidly crowding every State of the nation. In cotton she ranks first, and in oil production is among the leaders.

CHARLES E. TRIMBLE.



UNIQUE STRUCTURE PLANNED.

Proposed "toothpick" building to be erected at Memphis; 18 feet 1 inch by 70 feet; 12 stories; 165 feet from sidewalk to base of flagstaff; 35 feet from sidewalk to footings of basement and sub-basement, concrete, steel and brick; terra-cotta trimmings; plans by Victor Dunkerley, Memphis; James H. Scaife and D. S. Rice, owners.

According to State Mine Inspector T. A. Freeze, 2,359,647 tons of coal were mined in Arkansas in the year ended July 1, 1910.

Richmond to Build Motor Cars.

Motor cars of the highest standard are to be built at Richmond, Va., by the Kline Motor Car Co., which has been chartered with an authorized capital stock of \$500,000. The plant will include the main building, two stories high and 60x400 feet in size, of rectangular shape, offices and draughting-rooms, administration building, etc., and in full operation will employ from 500 to 1000 skilled mechanics. This company's officers are: President, S. E. Bailey of Philadelphia; vice-president and treasurer, Samuel W. Meek of Richmond; secretary, D. R. Midyette of Richmond. Among the directors will be James A. Kline of York, Pa., who will be the company's engineer and general manager. Mr. Kline has had long experience in automobile construction. The Richmond plant is to have an annual output of 2500 cars of various types.

Virginia Smelting Co.

The Virginia Smelting Co., 131 State street, Boston, is reported to have awarded contract for the construction of a sulphuric-acid plant at West Norfolk, Va. This company recently acquired the Eustace Smelting Co. plant at West Norfolk, and telegraphs the MANUFACTURERS RECORD that it will store 50,000 tons of ore, which will be smelted at the rate of 20,000 tons per month. The plant includes special deep-water facilities, improvements for economical handling, and what is claimed to be the largest copper furnace on the Atlantic coast.

To Display County Products.

The Merchants' Association of Salisbury, N. C., has arranged with Mr. M. V. Richards, land and industrial agent of the Southern Railway, to put a suitable cabinet in the Southern Railway station in which to make a display of Rowan county products. Such displays acquaint travelers with the products of the surrounding country, and would in all likelihood be a business developer.

Reciprocity in Publicity.

At the suggestion of Mr. A. Hamberg, one of the directors of the Board of Trade of Little Rock, Ark., that organization has undertaken to bring about a complete co-operation on the part of commercial organizations of Arkansas in promoting publicity about the many opportunities of the State. The work will be carried on through the State reciprocal department of the Little Rock Board of Trade.

Improvements Costing About \$95,000

The Wilson & Toomer Fertilizer Co. of Jacksonville, Fla., is completing its plant enlargements and installing a larger power plant at a cost of about \$65,000. It is also busily engaged in installing new furnaces and enlarging its acid plant at a cost of about \$30,000. All the machinery and supplies have been purchased.

Hardware Men in Session.

The Southern Hardware Jobbers' Association, Mr. John Donnan, Richmond, Va., secretary, and the American Hardware Manufacturers' Association, Mr. F. D. Mitchell, New York, secretary, are in joint convention this week at San Antonio, Tex.

A striking commentary upon the trend of immigration to this country in recent years to meet the demand for labor in rough work is the fact that the Pennsylvania Railroad has found it necessary, as a means of safeguarding employes working on or about the railroad tracks, to publish a book of instructions in nine languages—English, German, Greek, Hungarian, Italian, Lithuanian, Polish, Slovak and Swedish.

GOOD ROADS

MEMPHIS-TO-BRISTOL HIGHWAY PLANS.

[Special Correspondence Manufacturers Record.]

Nashville, Tenn., April 20.

Tennessee has the fever for better roads. The project at present of the greatest interest is the movement for a highway across the State from Memphis to Bristol, a distance of over 500 miles, which was mentioned in the MANUFACTURERS RECORD of March 23. The Memphis-to-Bristol Highway Commission, of which George A. Gowan of Nashville is president, and Charles C. Gilbert of Nashville is secretary, is very busy at present with the details for this great enterprise. This commission was appointed at a general convention in which 45 counties were represented, practically all of the countries through which the highway is to pass having delegates.

This great enterprise was the suggestion of Gov. B. W. Hooper, and contemplates the building of the highway by volunteers in two days. The Legislature will be asked to make an appropriation of \$15,000 for making an official survey for the highway, and this is the only State aid thus far mentioned. It is believed that this appropriation will be made by the Legislature, which is now in session. Another bill that will be pushed by advocates of good roads will provide for working some of the convicts on the highways of the State.

At the outset it might be stated that the commission does not expect to build a model road across the State in two days, and it is doubtful if such a feat will be possible. The plan at present is to open and dedicate the road on August 14 and 15. The problem before the commission will be the building of about 40 miles of road through the mountains of East Tennessee, and nearly 100 miles in Middle and West Tennessee. Roads already constructed will furnish nearly 400 miles of the State highway. It is also the purpose to repair and build up the links that are now in bad condition.

The commission has set out to secure not less than 50,000 volunteers to work on the road August 14 and 15. To this end blanks have been sent out to subcommissioners and committees in counties through which the highway will pass. Secretary Gilbert stated to the correspondent of the MANUFACTURERS RECORD that replies have been received from about one-fifth of those to whom blanks were sent, and that the commission now has enrolled about 18,000 volunteers. Many of these not only volunteer to work two days, but a considerable proportion express their willingness to labor two weeks, 90 days or until the enterprise is completed. Mr. Gilbert did not think that there would be any doubt about getting 50,000 volunteers before the time for beginning the work. The volunteers will be worked in companies and platoons, with overseers at intervals, as needed. The commission plans to have engineers to submit figures as to how many men will be needed in the various counties, and the army of workers will be assigned to carry out their part like clockwork. If they carve the way for the great highway and get it in fairly good shape, then the expectations of the commission will be realized and success assured.

Leaving Memphis, there are two routes feasible, one through Haywood county and the other through Fayette county. The commission has received advice from Haywood

county that citizens of the county will see to it that the road is built through the county if that route is adopted. The route will then be to Jackson, and thence to the Tennessee River. Material for macadamizing is not available in West Tennessee, and the commission will recommend the construction of dirt roads, with the use of the split-log roller. The split-log roller is an implement that has been found very useful in making dirt roads compact. It is used to roll the roads after rains, and has the effect of packing them and thereby lessening the damage by drainage, which is one of the most serious problems with regard to dirt roads. It also serves to diminish the cutting by the wheels of vehicles. It will be necessary to construct about 50 miles of road in West Tennessee.

After crossing the Tennessee River there are two routes considered. The route through the upper tier of counties will go through Benton and Humphreys counties, where what is known as the "cement gravel" abounds. This name has been given to the gravel because of its adhesive qualities. It is said that a quantity of it can be quarried one night and soon thereafter it will take a pick to dig through it again. This is the material which will be used after crossing the river if the upper route is taken. If the lower route is taken through Lewis county creek gravel abounds in liberal supply and will be used.

This gap will place the highway well into Middle Tennessee, and the route will lead on to Nashville. For a distance of nearly 200 miles there will be very little building required, as macadamized roads have been constructed for years. For whatever work that is needed in both Middle and East Tennessee there is ample limestone available for macadamizing. The knotty place for the commission will be in Cumberland county near the line between Middle and East Tennessee. This is a mountainous county, sparsely populated, and there is a gap of about 40 miles, which will require some of the heaviest work of the entire route. On account of the sparsely-settled condition of the county it will be necessary to give this county much assistance in building the link of the State highway. However, the people are said to be very eager for the success of the enterprise, and will co-operate enthusiastically in the movement. Cumberland county has rich timber and mineral resources, and the citizens feel that the highway will contribute much for their development. Going on to Knoxville and then to Bristol there will be little work, as good roads now exist.

County courts along the line of the highway have been sent communications suggesting that great aid can be secured if they will make modest appropriations for purchasing road machinery. The counties will lose nothing by this plan, as they will have the machinery for continued use. It is expected that other counties will tender the use of machinery now owned. It is also expected that manufacturers of road machinery will show interest in the enterprise. There has been mention of one large company tendering a fine road roller for use, and later to be given as a prize for the county making the best record.

Secretary Gilbert stated that the commission hopes to get the survey of the route made some time next month, and in the meantime the perfecting of plans will continue.

JOHN LEIPER.

WEEK'S HIGHWAY RECORD.**Progress in Southern Road and Street Improvement.**

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Bellville, Tex.—First Justice Precinct No. 1 of Austin county voted \$50,000 of bonds for road improvements.

De Soto, Mo.—Special Road District voted \$30,000 of bonds to improve three roads.

Fayetteville, N. C.—City authorized issuance of \$4000 of bonds for street paving.

Jasper, Fla.—City voted \$17,500 bond issue for street and sidewalk improvements.

Longview, Tex.—City voted bond issue of \$90,000 for paving business streets, electric lighting, etc.

Paris, Tex.—Precinct No. 1 of Lamar county voted \$300,000 of bonds for road construction.

Tazewell, Va.—Tazewell county voted \$625,000 of bonds for road improvements.

Tupelo, Miss.—City voted \$50,000 of bonds for street paving, etc.

Wallis Station, Tex.—Wallis Precinct of Austin county voted \$25,000 bond issue for road construction.

Bonds to Be Voted.

Dayton, Tex.—Dayton Precinct of Liberty county votes May 23 on issuing \$275,000 of bonds for constructing shell road.

Greenville, S. C.—City is considering issuing \$125,000 of bonds additional for street paving.

Liberty, Tex.—Liberty Precinct of Liberty county votes May 16 on issuing \$250,000 of bonds for constructing about 90 miles of roadway.

McMinnville, Tenn.—Warren county votes May 6 on issuing \$100,000 additional bonds to extend five roads recently completed.

Contracts Awarded.

Bunkie, La.—Canal committee awarded contract at \$22,000 to construct road and canal.

Clarksburg, W. Va.—Harrison county awarded contract at \$8230 to pave road.

Dallas, Tex.—City awarded contract at about \$20,000 for creosoted wood block paving.

Dublin, Ga.—City awarded contract at \$13,334 for vitrified brick paving.

Fort Worth, Tex.—City awarded contract for bitulithic paving on boulevard, street and avenue.

Houston, Tex.—Harris county awarded contract for grading road.

Jasper, Fla.—Hamilton county awarded contract at \$300 per mile for construction of 30 miles of road.

Maryville, Tenn.—Blount county awarded contract for road construction.

Nashville, Ga.—Berrien county awarded contract for constructing nearly 11 miles of road and bridging drains; right of way 30 feet wide.

New Decatur, Ala.—City awarded contract at about \$8300 to construct cement sidewalks.

Pawhuska, Okla.—City awarded contracts for street pavement.

Richmond, Va.—City awarded contracts for \$40,000 worth of curbing and guttering on various streets.

Roanoke, Va.—City awarded contract for constructing five-foot sidewalks.

Contracts to Be Awarded.

Asheville, N. C.—Buncombe county receives bids until April 29 for road grading.

Baltimore, Md.—State Roads Commission receives bids until May 10 for constructing about 57 miles of roads in various counties.

Birmingham, Ala.—City adopted street and storm-sewer construction, equipment requiring expenditure of \$320,000.

Chattanooga, Tenn.—Hamilton county will invite bids for bitulithic and other paving.

Collins, Miss.—Covington county contemplates awarding contract on May 1 for constructing about 18 miles of highway; will award contract for 20 or 25 miles additional when surveys are complete.

Cullman, Ala.—City will award contract on May 1 for constructing seven miles of concrete sidewalks.

Dallas, Tex.—City receives bids until May 3 for asphalt-macadam paving.

De Land, Fla.—Volusia county receives bids until May 1 for constructing one-half mile of shell or clay road.

Fort Caswell, N. C.—Constructing Quartermaster receives proposals until May 12 for constructing about 500 square yards of macadam, concrete or gravel road and about 2000 feet of sidewalks.

Frederick, Md.—City has invited bids for vitrified-brick paving and granite curbing on various streets.

Grenada, Miss.—City receives bids until May 1 for constructing 75,000 to 150,000 feet of granolithic sidewalks.

Galveston, Tex.—Galveston county opened bids on April 24 for bulkheading, surfacing and paving.

Houston, Tex.—Harris county is reported as contemplating construction of 28 miles of crushed-rock road to cost \$100,000.

Houston, Tex.—Tolman Engineering Co. invites bids for clearing, grubbing and grading three miles of streets.

Lexington, Ky.—City received bids until April 26 for macadam paving, concrete curbing, etc., on various streets.

Lexington, Mo.—Lexington Road District will grade and macadamize 25 miles of road; \$125,000 is available.

Memphis, Tenn.—City opened bids for wood-block or asphalt paving, relaying old brick pavement, etc.

Nashville, Tenn.—City received bids until April 25 for constructing granitoid curbing and sidewalks.

Oklahoma City, Okla.—City receives bids until May 1 for grading various streets.

Paducah, Ky.—McCracken county will construct 40 miles of gravel road costing \$40,000.

Sedalia, Mo.—Road Committee recommends construction of 141½ miles of road; Pettis county votes May 16 on issuance of \$350,000 of bonds.

St. Augustine, Fla.—City opened bids April 26 for curbing with granite or concrete.

St. Louis, Mo.—City receives bids until May 5 for reconstructing 21st and 25th streets.

Sumter, S. C.—City will invite bids for street improvements costing about \$25,000.

Washington, D. C.—District Commissioners receive bids until May 6 for laying asphalt-block pavements.

Wheeling, W. Va.—Ohio Valley Automobile Club opens bids May 1 for paving road with hillside brick; 15 feet wide by 2100 feet long.

Williamston, N. C.—Williamston township will construct sand clay roads, for which \$40,000 is available.

Wise, Va.—Wise county opens bids on or about May 25 for constructing 125 miles macadam road; \$700,000 bond issue voted recently.

A Good-Roads Train.

Starting at Mobile, Ala., on May 1, the Southern Railway Co., working in conjunction with the United States Office of Public Roads, for the purpose of advancing the cause of good roads throughout the South, will run a special road-improvement train. Stops will be made at all the

more important points along the Southern Railway and affiliated lines, and the tour of the train will not be completed until October.

FROM SEA TO MOUNTAINS.

Plans for a Great Central Highway in North Carolina.

[Special Cor. Manufacturers Record.]

Raleigh, N. C., April 21.

In the course of an interview Mr. H. B. Varner, who is the president of the "Central Highway Association," created by the Legislature at its recent session, gave the MANUFACTURERS RECORD some very interesting information regarding the great State road which is to be built between Morehead City, which is at the southern end of the inland waterway, and a point on the Tennessee line not far from the town of Hot Springs, N. C. The length of the road is found to be almost precisely 460 miles, and the United States road authorities, like those of the State and of the 19 counties the highway will traverse, are showing keen interest in the work. Mr. Varner says this is by far the greatest single highway ever undertaken by any State in the Union, and that it will take rank with the greatest anywhere in the world. It will reveal North Carolina like a panorama, beginning at the coast, where there are palmettos and sub-tropical conditions, ending in the high mountains; giving as wide a range of flowers, trees, climates and scenery as there is between South Carolina and New Hampshire, for the road will go in sight of the highest mountains east of the Rockies, and will traverse the North Carolina "Land of the Sky." In its length this highway will pass through about 65 cities and towns, and will show every phase of North Carolina life, agricultural and industrial.

When President Varner was asked what the road would cost per mile he said that in the eastern section the cost would be only from \$200 to \$600, and that sand-clay would be used, this giving one of the best roads possible, this type having been found of very great value in South Carolina, Alabama, Georgia, Florida and other States, and to be one which should be adopted whenever possible. In the central and Piedmont sections the cost will be from \$1000 to \$3000 per mile, and the type will be macadam or gravel, according to the locality. In the mountain region macadam will be used, and the cost will be from \$3000 to \$5000.

It was at a meeting in the Raleigh Chamber of Commerce that the plans were originally made for this great highway, the originator being State Geologist Pratt Governor Kitchin having given the scheme enthusiastic endorsement in a message to the Legislature. Dr. Pratt will have United States and State experts to make the preliminary surveys and fix the line of the road, and on the 8th of May the officials interested, with the commissioners appointed by the Legislature to represent the 19 counties which the highway will traverse, will begin an automobile tour over the entire route, starting at Morehead City, where there will be a big demonstration, then going westward and stopping at a representative point in each of the counties. President Varner says that after the route is all laid off and stakes set, not only along the present highways, which will be largely used, but also along certain new sections of the route, arrangements will be made to get materials and road-making machinery and implements along the line, and at the proper time to designate a week during which people from town and country along all the distance will devote themselves to the construction. It is expected to arouse a great deal of pride in the work on the part of the various counties and the towns to be traversed, and

President Varner has no doubt of the complete and early success of the undertaking. The road will pass through many important manufacturing points, and also through some of the best trucking and farming country in the State.

FRED. A. OLDS.

Individual Roadmakers.

Board of Trade,

Greenville, S. C., April 22.

Editor Manufacturers Record:

The Greenville Board of Trade has started a movement for co-operation between the business men of the cities and the farmers of the county, which, it is believed, will lead to a better understanding between the two and a general betterment in crop conditions throughout the section. Greenville business men have signified their willingness to co-operate with the Board of Trade in every way possible, and it is expected that much good will come out of the plan. An effort will be made to bring the people of the country to a realization of the many advantages of good roads. A new plan will be suggested to the farmers, that they take a pride in their roads; that they agree each man to keep the roads in front of his place in good shape by using the split log drag after the rains when the teams cannot be used on the farms. It is the opinion of our business men that this suggestion will be followed, and that the roads of the county will be maintained in good shape, which will cost the county no money and the farmers very little time and trouble.

E. B. ADAMS, Secretary.

Notes.

Secretary A. W. McKeand of the Board of Trade of Charleston, S. C., is furthering a plan for the construction of a great highway from Charleston through Summerville, Branchville, Orangeburg, St. Matthews, Columbia, Newberry, Clinton and Laurens, or Spartanburg to Greenville and on to Asheville, N. C.

The trustees of the Public Central Highway, proposed to be built 460 miles across North Carolina from Beaufort harbor, on the coast, to the Western Mountains, organized last week at Raleigh with H. B. Varner of Lexington, chairman; Edward E. Britton of Raleigh, secretary; George C. Royal of Goldsboro, treasurer, and William Dunn of Newbern, Dr. J. M. Templeton of Cary, R. R. Clark of Statesville, W. T. Morgan of Marion, Thomas J. Murray of Marshall, J. A. Wellons of Smithfield and H. B. Varner of Lexington, central committee.

Houston and La Porte.

Contracts have been signed at Houston, Tex., for the proposed interurban electric railway from that city to La Porte and Sylvan Beach, 25 miles, according to a report quoting A. Foster Irwin, representing the parties backing the plan. The W. E. Ule Construction Co., which has been operating in Oregon and Washington, as well as other States, will do the work, which will begin about June 1. This is the line projected some time ago by the Houston & Bay Shore Traction Co. Swedish bankers are now said to have become interested in it.

Public Service Insurance.

A report from St. Louis says that Daniel G. Taylor announced at the convention of the Missouri Electric, Gas & Street Railway and Water-works Association that a syndicate would be organized at St. Louis to handle all the indemnity business of the public service companies in the State. This will cover fire, casualty and fidelity insurance, according to the report. An exchange will be organized to conduct the business for the companies subscribing to the plan.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

LARGE RAILWAY MERGER.

Extensive Power Development and Line Expansion May Follow Union of Properties.

A proposition to merge the Virginia Railway & Power Co. of Richmond and the Norfolk & Portsmouth Traction Co. of Norfolk, Va., is being worked out by the financial interests concerned in the properties. It is intended to have the merger effective on July 1, when the new fiscal year of these companies begins. It is anticipated that extension and improvement work will be undertaken upon a larger scale after the fulfillment of the plan, especially with regard to the further development of water-power at or near Petersburg to furnish more electricity.

It is also rumored that an electric railway from Norfolk to Washington may result from the merger. There has long been talk of building such a line, and Frank Jay Gould, head of the Virginia Railway & Power Co., is also president of the Richmond & Chesapeake Bay Railway, operating an electric line from Richmond to Ashland, Va., 15 miles, and which proposes to extend to Fredericksburg and Washington. A proposition to build a railway from Norfolk to Fredericksburg was recently agitated at Hampton, Va. There is further talk of a line from Norfolk to Petersburg.

The Virginia Railway & Power Co. owns and operates the street railway, lighting and power facilities in Richmond and Petersburg, Va., including Manchester, a suburb of Richmond, as well as the electric railway connecting these places. It has 120 miles of standard-gauge track and 311 cars. There are four power stations, two substations, 12 power plant engines and 500 electric motors. The company represents a consolidation of the properties of the Virginia Passenger & Power Co., the Richmond Passenger & Power Co., the Richmond Traction Co. and the Richmond & Petersburg Electric Railway Co. It has \$7,500,000 common and \$5,000,000 preferred stock and \$7,542,000 of first and refunding mortgage 5 per cent. bonds, which mature July 1, 1934, besides \$2,900,000 of underlying bonds. The directors are Frank Jay Gould of New York, chairman of the board; William Northrop, president; F. Stitlerding, vice-president; Henry W. Anderson, vice-president and general counsel, all of Richmond; Guy Phillips of New York, secretary and treasurer; Edwin Gould of New York, Percy M. Chandler of Philadelphia and R. Lancaster Williams of Baltimore.

The Norfolk & Portsmouth Traction Co. controls and operates about 140 miles of electric street railway in Norfolk, Portsmouth and Berkeley, Va., the ferries operating between these places and also the ferries to Newport News and to Old Point Comfort, the City Gas Co. of Norfolk and the electric-lighting systems in Norfolk, Portsmouth, Berkeley and their vicinity, as well as Suffolk, Va. The company was formerly known as the Norfolk, Portsmouth & Newport News Company, and was formed by a consolidation of the Port Norfolk Electric Railway Co., the Portsmouth & Smithfield Railroad Co. and the Portsmouth, Pig's Point & Newport News Railway Ferry & Hotel Co. Later the Berkeley Street Railway Co. and the Old Dominion Railway Co. were absorbed and the name changed to the Norfolk & Portsmouth Traction Co. It then acquired the Suffolk Light & Ice Co. and leased the Norfolk Railway & Light Co. It owns

the Norfolk & Atlantic Terminal Co. and practically all of the stock of the Norfolk & Ocean View Railway Co. It has \$3,000,000 of common stock and \$3,000,000 of 5 per cent. cumulative preferred stock, besides \$5,351,000 of first mortgage 5 per cent. 30-year bonds, due January 1, 1936, and \$797,000 of 6 per cent. convertible gold notes. There are about \$6,000,000 of underlying bonds.

The directors are John Blair MacAfee of Philadelphia, president; Frank O. Briggs of Trenton, N. J., vice-president; G. M. Serpell of Norfolk, second vice-president; E. C. Hathaway of Norfolk, general manager; Henry W. Anderson of Richmond, F. W. Roebing, Jr., of Trenton, Albert H. Carroll and R. Lancaster Williams of Baltimore, J. Levering Jones and George W. Norris of Philadelphia, Caldwell Hardy and J. W. Perry of Norfolk, W. W. Moss and Fergus Reid.

As is indicated by its ownership and leases, the company, in addition to controlling the street railways, has the electric-light and power business of Norfolk, Portsmouth and Berkeley and Suffolk, with the ice business in the latter; the gas business in Norfolk; the ferries above herein described; three power-houses, including a new central plant of large capacity, and the resort called Ocean View, which includes 300 acres of land, a hotel, casino, bathhouses and amusement features.

A DOUBLE-TRACKED TUNNEL.

Baltimore & Ohio Railroad Decides on Another Tube at Sand Patch.

The Baltimore & Ohio Railroad Co. has awarded contract to H. S. Kerbaugh, Inc., 922 Arcade Building, Philadelphia, for a new double-tracked tunnel about 4000 feet long and lined with brick at Sand Patch, 30 miles west of Cumberland, Md., on the Pittsburg route. This will be an entirely new tunnel alongside and to the north of the present single-track tunnel at the crossing of the Alleghenies. This will give the company three tracks through the mountain, as it is intended to continue the use of the old tunnel indefinitely after the new one is completed, which will be in about 18 months. The cost of the work will be about \$1,250,000. F. L. Stuart is chief engineer for the railroad.

When bids for the construction of this tunnel were received about April 1 estimates were also made by contractors on the cost of building a three-track open cut through the same ridge, but to the south of the old tunnel, instead of boring a new tube through. Such a cut would have been 190 feet deep, and, owing to the nature of the earth and rock formation, would have furnished engineering and maintenance problems of magnitude, besides being very costly, but the reasons for adopting the tunnel plan were not announced.

KANSAS CITY STATION.

Architect's Plans Completed for the Handsome Structure and Contracts Will Soon Be Let.

Detailed plans are reported finished for the proposed five-and-a-half-million-dollar union railroad station at Kansas City, Mo., by Jarvis Hunt of Chicago. President W. S. Kinnear of the Kansas City Terminal Railway Co. is quoted as making the announcement. The specifications will be ready soon, and will be submitted to contractors. Construction on the building is expected to begin between June 15 and July 15. It is to be finished in two years.

A detailed description of the handsome structure says that the great entrance hall will be 240 feet long and 94 feet wide, and will be finished in white and vari-colored

marbles, the ceiling being of metal and the floor of tiles. The ticket offices will be in this apartment, which will not, however, contain any seats; they will be in an adjoining waiting-room 355 feet long and 86 feet wide, from which stairways will lead down to the track level. There will be 30 ticket windows in the great hall, which will also be surrounded by other rooms to which ready access by travelers is necessary, such as baggage-rooms, telegraph offices, restaurant, etc. The entire station and terminal project will require, it is estimated, the expenditure of from \$30,000,000 to \$35,000,000.

A FARMERS' RAILROAD.

Traction Lines to Carry Produce and Passengers to Points on Steam Routes.

[Special Cor. Manufacturers Record.]

San Antonio, Tex., April 24.

The traction system centering at San Benito in the Lower Rio Grande Valley will be extended during the present summer to a number of towns in the valley, and may be built to Mission, 45 miles to the westward. Since the assurance that a railroad will be constructed from San Antonio to Brownsville, S. A. Robertson, the head of the traction movement in the valley, has financed a plan for enlarging the system. This is one of the unique traction lines in the country, serving the double purpose of rapid transit for passengers and also transportation for the products of hundreds of small truck farms in that part of the country to the railway stations.

It is understood that Mr. Robertson's plans contemplate making Brownsville the southern terminal of his road, and also comprehends the possibility of extension northward through the fertile sections of the Gulf coast to Corpus Christi, and ultimately to Galveston. It has been a theory of his, successfully worked out in the past few years, with a part of the line already built, that such a road can carry the farm products to the shipping points on the steam roads cheaper than farmers can afford to transport them (much more rapidly, too), and yet make money for the traction owners.

Mr. Robertson is a civil engineer of wide experience who has met with success. He was the first engineer to assert that the wide agricultural area about San Benito could be irrigated by gravity canals, getting their water from the Rio Grande at a point some miles up the river. When he first suggested this some of the "wise ones" thought he was a dreamer. But he went to work to test his ideas, and found them most practical. The large canal he constructed furnishes an ample supply of water for an agricultural section consisting of several thousand acres, and at no time has it failed, even when the Rio Grande was at its lowest ebb. He declares that he will be just as successful with his traction system.

LEASED BY THE FRISCO.

Louisiana Southern, It Is Reported, Will Build Fine Terminals.

A report from New Orleans says that the Frisco system has closed an agreement to acquire control by lease of the Louisiana Southern Railroad, a line about 46 miles long and extending from New Orleans to Belair and Ycloskey, respectively. President B. L. Winchell of the Frisco at St. Louis is quoted as confirming the report of the lease. The line is owned by an English syndicate represented at New Orleans by Samuel Gibbs.

It is further said that the Frisco will rehabilitate and improve the road, besides building terminals and docks near Ycloskey, about 20 miles from the Chalmette

terminals and in St. Bernard parish. This would apparently mean the establishment of seaport terminals on Lake Borgne. Belair, the other terminus of the road, is on the Mississippi River south of New Orleans.

New Equipment, Rails, Etc.

The Norfolk & Western Railway, according to a report from Roanoke, Va., where the headquarters of the company are situated, has ordered the construction of six more locomotives at its own shops, where an order for five locomotives is now being completed.

The Missouri, Oklahoma & Gulf Railroad is reported to have ordered four consolidation locomotives from the Baldwin Locomotive Works, Philadelphia.

The San Antonio & Aransas Pass Railway, says a market report, is having three locomotives built at Baldwin's and one by the Lima (O.) Locomotive and Machine Works.

The Birmingham Railway & Light Co. is reported to have given another order (this time 10) for prepayment cars to the McGuire-Cummings Manufacturing Co. Its previous order was for nine cars.

The Missouri, Arkansas & Gulf Railway Co., Gilbert Lay, president, St. Clair, Mo., is in the market for railroad materials and equipment, and would like to have prices on good relaying rails of 65 to 75 pounds per yard.

The West Missouri Electric Railway Co., H. D. Patee, president and general manager at Kansas City, is in the market for railroad construction materials, including bridges; also rolling stock, including an electric locomotive.

The Missouri, Kansas & Texas Railway is reported to have ordered 8000 tons of rails from the Maryland Steel Co., Sparrows Point, Md., and 6000 tons from the Edgar Thomson Steel Works, Pittsburg.

The Baltimore & Ohio Railroad has ordered 5000 tons of rails from the Carnegie Steel Co., Pittsburg.

Ozark Short Line.

An officer of the Missouri, Arkansas & Gulf Railway says that the proposed line will be 125 miles long from Rolla to Bakersfield, Mo., via Licking. Other points which may be touched are Lecom, Arnett, Lenox and Willow Springs. The line will traverse generally level country. There will be two wooden bridges near Rolla, each 125 feet long. Connection will be made with the Frisco system at Rolla, and with the Memphis line of the same road at Willow Springs or Cabool, or at some point between those places. E. E. Young of Rolla, Mo., is the contractor. Railroad construction materials will be purchased, including good second-hand relaying rails and rolling stock. The directors are Gilbert Lay of St. Clair, Mo., president and treasurer; E. C. Comstock of Lecom, Mo., vice-president; W. E. Fink of Springfield, Mo., secretary; E. C. Halbert of Licking, Mo.; Carl Kimmell of Lecom, Mo.; J. W. Cook of Lenox, Mo., and A. J. Frank. The road will otherwise be called the Ozark Short Line.

West Missouri Electric.

H. D. Patee, president and general manager of the West Missouri Electric Railway Co., Kansas City, Mo., says that contract has been let to the Spitaufsky-Wagner Construction Co., and that the line is to be built from Kansas City to Harrisonville, Mo., 34 miles, via Grandview, Belton and Raymore. This will include three steel girder and concrete bridges, one of 200 feet, one of 100 feet and the other of 60 feet. The company will purchase bridges, railroad and electric construction materials, besides rolling

stock, including an electric locomotive. Connections will be made with the Frisco, the Missouri Pacific, the Kansas City Southern, the Missouri, Kansas & Texas and the Kansas City, Clinton & Springfield railroads. The route is through rolling country. The other officers and directors are C. C. Christie, treasurer; S. P. Allen, secretary; John Spitaufsky and Gordon A. Wagner. The chief engineer is W. N. Nagle.

Culpeper to Washington, Va.

Survey is to be completed immediately, according to reports from Washington, Va., for the projected railroad to connect that place with Culpeper, on the Southern Railway, about 30 miles distant. The enterprise has been referred to both as the Blue Ridge Railroad and the Rappahannock Railway. Mrs. A. M. Moore of Cleveland, O., was reported working on the plans, and it is further said that Ohio capital will be interested in the construction. Subscriptions of \$175,000 were raised in Rappahannock and Culpeper counties, Virginia, for the road, provided that it would be completed and in operation within three years. It is said that it will be finished in 15 months. The line will furnish transportation facilities to a great apple-growing region. Among those who have been mentioned as interested are E. W. Brown of Washington and A. W. Pulliam of Culpeper.

Secona Valley & Southeastern.

The Secona Valley & Southeastern Railroad Co. is the new name of the West Point & Houston Railroad Co., a proposed enterprise in Mississippi. It was originally intended to build from the Tombigbee River to a point in Noxubee county, but the plan has been changed, it is reported, to construct a line about 60 miles long from that river to a point in Calhoun county, Mississippi. Connection will be made, it is said, near the beginning with a road to be built in Alabama. The contemplated route would take the line through Lowndes, Clay, Chickasaw and Calhoun counties and either to or near Columbus, West Point, Houston and Pittsboro, Miss. A. F. Fox and Moseley & Lagrone of West Point have heretofore been mentioned in connection with this enterprise.

Sallisaw to Honey Grove.

An officer of the Sallisaw, McAlester & Southern Railway Co. writes that it is not determined when contracts will be let for construction of the proposed line from Sallisaw via McAlester, Okla., to Honey Grove, Tex., about 200 miles. The route lies through rolling country. Connections will be made with the St. Louis, Iron Mountain & Southern Railroad (Missouri Pacific system), the Kansas City Southern, the Midland Valley, the Rock Island, the Missouri, Kansas & Texas and the Frisco railroads. The incorporators and directors are John E. Cavanagh, president, treasurer and general manager; William Hayes Fuller, vice-president; William P. Freeman, secretary; Milton J. Smith, chief engineer, and Andrew B. Ringland, all of McAlester, Okla.

New Western Maryland President.

Alexander Robertson, vice-president and general manager of the Western Maryland Railway, has been elected president of the company to succeed Benjamin F. Bush, who was elected last week to be president of the Missouri Pacific Railway. Mr. Robertson has been head of the operating department of the Western Maryland since 1905. Prior to that for a year or two he was general manager of the Terminal Railroad Association of St. Louis, but before that he was general manager of the

Western Maryland for several months. He is about 50 years of age. John A. Shepherd, superintendent of the Maryland division, has now been appointed general manager of the road.

Nashville-Gallatin.

Charter has been filed at Nashville, Tenn., for the proposed Nashville-Gallatin Interurban Railway, with capital stock of \$75,000. The line will be about 30 miles long, and the incorporators are H. H. Mayberry, John A. Pitts, R. A. Bailey, R. A. Bailey, Jr., and R. W. McLemore. The route selected is via the Gallatin turnpike, and Mr. Mayberry is reported saying that the road will be built in the shortest time practicable. It was he who built the electric railway from Nashville to Franklin, Tenn., which runs southwest from Nashville, but the new line will be in the opposite direction.

Railroad Notes.

A dispatch from Paris, Tex., announces that the Oklahoma, Red River & Texas Railroad, extending from Blossom to Deport, Tex., several miles, has been purchased by D. M. Godman of Oklahoma.

The headquarters of the Virginia-Carolina Railway Co., chartered several months ago to build a line from Ridgeway, Va., to Spray, N. C., have, according to a dispatch from Richmond, been changed from Ridgeway to Roanoke, Va.

The Central of Georgia Railway recently celebrated the completion of its new shops at Macon, Ga., by a reception and luncheon attended by about 1500 people. The shops and yards represent an investment estimated at about \$2,000,000.

The General Electric Co., Schenectady, N. Y., has just delivered a gas-electric motor car to the Buffalo, Rochester & Pittsburg Railway, similar in general style to the cars built some time ago by the same company for the Southern Railway. These cars generate their own power.

A dispatch from Macon, Ga., says that application has been made to charter the Parker Railway Co., with a capital stock of \$100,000, fully paid in, and that the company has for years operated dining-rooms, restaurants and news stands in railroad stations and on trains throughout the South.

The Concord (N. C.) Street Railway Co., says a report from there, has just operated its first car, which is of the storage battery type invented by Thomas A. Edison and built by the Federal Storage Battery Car Co. It is 31 feet long, and is similar to the Edison type cars operated in New York.

The Joplin & Pittsburg Railway of Joplin, Mo., is reported to have been acquired by the American Railways Co. of Philadelphia, which has lines in Roanoke and Lynchburg, Va., and other cities. It is further reported that the same organization has just closed a deal to acquire the Ohio Valley Electric Railway, connecting Huntington, Kenova and other points in West Virginia with Catlettsburg, Ashland and other Kentucky places, as well as Iron-ton, O.

The vital relationship of the Pennsylvania Railroad system to the territory it traverses may be seen from figures in the annual "Record of Transportation Lines" issued by the company. They show that on December 31, 1910, the Pennsylvania controlled 11,262.73 miles of line and a total trackage of 24,616.58 miles. It operates in 14 States, which have a population of approximately 46,000,000. The system now has 3524 miles of double track, 780 miles of triple track and 594 miles of four-track road.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

SOUTHERN COTTON MILL MEN.

Richmond Program of the American Cotton Manufacturers' Association

In addition to the annual address of President D. Y. Cooper of Henderson, N. C., and reports by Secretary and Treasurer C. B. Bryant of Charlotte, N. C.; T. H. Rennie, Pell City, Ala., chairman of the committee on ginning, baling, buying, tare, etc.; Lewis W. Parker, Greenville, S. C., chairman of the committee on cotton exchanges and of the committee on uniform sales contracts; John A. Law, Spartanburg, S. C., chairman of the committee on excess tare and cotton warehousing; R. M. Miller, Jr., Charlotte, N. C., chairman of the committee on publicity; Charles D. Tuiler, Atlanta, Ga., chairman of the committee on the Pan-American Union Conference, and Charles H. Gorton, Pawtucket, R. I., chairman of the committee on by-laws, the program of the annual meeting at Richmond, Va., May 18-19 of the American Cotton Manufacturers' Association will include addresses by Harrington Emerson, Boston, Mass., on efficient and scientific management; by Andrew E. Moore, Gastonia, N. C., on the Duke plan of selling goods in China; by Dr. Gilbert Reid, a missionary to China, on the increase of our cotton piece goods trade in that country; by J. M. Smith of the Buckeye Electric Co., Cleveland, O., on proper illumination of mills; by Arthur R. Marsh, president of the New York Cotton Exchange, on that exchange; by W. A. Gilreath, Greenville, S. C., on the encouragement of farmers to use gin compression; by H. B. Jennings, Lumberton, N. C., on personal observations of a cotton picker; by Howard Ayres, New York, on the possibilities of a cotton goods export association, and by J. E. Cheesman, New York, on the present status of the world cotton-ginning industry.

Mayor D. C. Richardson of Richmond will welcome the association and the Chamber of Commerce has arranged social relaxation.

Buck Creek Cotton Mills.

The Buck Creek Cotton Mills of Siluria, Ala., will expend about \$250,000 for additional buildings and machinery. This company will erect additions to its main mill, power-house and warehouses, besides building from 30 to 40 operatives' cottages, contracts having been awarded to T. C. Thompson & Bros. of Birmingham, Ala., and Charlotte, N. C. Contracts have also been awarded for the additional machinery, which will include 10,000 spindles, with accompanying roving, carding and picking machinery, and 40-inch automatic looms in place of present 28-inch plain looms. Fales & Jenks Machine Co., Pawtucket, R. I., will furnish spindles; Woonsocket (R. I.) Machine & Press Co. will furnish roving machinery; Saco & Pettie Company of Newton Upper Falls, Mass., will furnish carding machinery; Kitson Machine Shop, Lowell, Mass., will furnish picking machinery. Looms will be supplied by the Stafford Company of Readville, Mass. The engineer in charge of the enlargement is J. E. Sirrine of Greenville, S. C. This Buck Creek com-

pany was mentioned last week as formed with \$600,000 capital stock as a reorganization of the Siluria Cotton Mill Co., which was capitalized at \$250,000. T. C. Thompson of Birmingham is president of the new organization, and J. W. Cannon of Concord, N. C., will be its manager.

Republic Cotton Mills.

Referring to his company's plant, completed recently and heretofore detailed by the MANUFACTURERS RECORD, Robert S. Mebane, president of the Republic Cotton Mills, Great Falls, S. C., writes:

"Our mill has 25,000 spindles and 650 automatic looms. From a standpoint of machinery and mechanical equipment it represents the last analysis, being thoroughly up to date in every particular.

"We have about 100 cottages, consisting of three, four and six rooms, and overseers' houses, all of which are thoroughly equipped with modern sewerage and plumbing, ozonized water, lighted by electricity, and a large portion of them have hot and cold water, with baths in addition. These cottages are of a superior type, all being plastered with wood fiber and well built. Our sewer system and water-works system are as complete as that of any modern city.

"We have a large department store building, consisting of grocery department, dry goods department, millinery department and drug department; also a nice market, well equipped with refrigerators and modern appliances. We also have a thoroughly commodious and comfortable hotel here for our clerks and visitors.

"We will very soon commence the erection of a nice graded school and church."

The Pelzer Corporation.

Relative to the organization of the Pelzer Corporation (recently mentioned), which is planned to merge a number of mill companies, Capt. Ellison A. Smyth of Greenville, S. C., president of several of the companies, has authorized the following statement:

"There is in process of formation an organization to be known as the Pelzer Corporation. The amount of capital is as yet undetermined, being dependent upon size and number of mills which may be asked to join in the movement. The group of mills which form the nucleus of the organization are of high standard physically and financially, with good records as to earnings. Their product ranges from heavy export sheetings and drills of well-known brands, through light sheetings and print cloths to fancies made with combed yarns of staple cotton. No reorganization of any of the mills is necessary, and the slightest possible changes in management desired.

"Present conditions in textile manufacturing, however, demand reform in selling, in the opening of new outlets for goods, in increased efficiency and in the various economies that are possible through combined purchases and supervision.

"The main purpose of the proposed organization is to give to the mills, which are now or may hereafter be admitted to the corporation, such financial independence and strength as will enable them to adapt themselves to the new conditions and thus help to put an end to the demoralization now menacing the entire industry.

"The financial plan—representing the combined advice of leading American financiers and dry goods distributors—is a most simple one, contemplating no change in ownership of the several properties, but a continuance of the local management and directorates with the added strength of a

financial bulwark that will make possible the carrying out of reforms above outlined.

"As previously stated, due announcement will be made just as rapidly as matters can be definitely determined in their regular sequence."

Improving Cotton Mill Equipment.

The Nantucket Mills of Spray, N. C., is installing another boiler and equipping its looms with warp stop motions. The boiler is being installed by A. H. Washburn of Charlotte, N. C., and the warp stop motions by the Compton & Knowles Loom Works of Worcester, Mass., and the Coldwell-Gildard Company of Fall River, Mass.

Improvements Costing About \$12,000

The Ware Shoals (S. C.) Manufacturing Co. will install two new intermediate frames and four jack frames, costing about \$7000. This machinery is being furnished by the Saco & Pettie Company of Newton Upper Falls, Mass. Other general betterments in progress will cost about \$5000.

Mill Machinery and Plans.

C. P. Chenault, Frankfort, Ky., wants the names and addresses of makers of machinery for manufacturing cotton and the name and address of an engineer who prepares plans and specifications for mills. He is interested in building a mill.

Textile Notes.

J. H. Neisler of Reynolds, Ga., is reported as interested in a plan to build a cotton mill.

The Lily Mills of Spray, N. C., will make some additions to its dyeing plant, and has awarded the contracts.

C. C. Hanson, Tennessee Trust Building, Memphis, Tenn., proposes the organization of a cotton-mill company.

It is rumored that the Klotts Throwing Company will enlarge its silk mill at Lonaconing, Md. This company's main offices are at Carbondale, Pa.

R. T. Jaynes and Wm. A. Hetrick of Walhalla, S. C., will organize a company to establish a hosiery knitting mill at Spartanburg. They have purchased a suitable building in which to install the machinery.

MINING

SULPHUR AND PYRITE.

Great Growth in Production During Last Ten Years.

From a production of but 3147 long tons of sulphur, valued at \$88,100, to an output of 239,312 tons, valued at \$4,432,066, in a period of 10 years is a long stride, but this is the growth that has taken place in the sulphur industry in the United States since 1900. Furthermore, it was not so very long ago that the United States sent abroad more than \$3,000,000 annually for native sulphur, by far the larger part of which came from Sicily. In 1900 the United States not only produced enough sulphur for her own needs, but exported 37,142 long tons, valued at \$736,928, as compared with an importation of various grades valued at \$549,632, leaving a balance of trade in favor of this country of nearly \$200,000.

The great reversal of conditions whereby the United States has become a dominant factor in the sulphur industry of the world is largely due to the inventive genius of Herman Frasch, an American, of Cleveland, O. The process whereby sulphur is obtained in practically pure condition from the earth is known from the inventor's name as the Frasch process, and is em-

played in working the great sulphur deposits in Louisiana. Briefly, the process is as follows: A well is driven in much the same manner as a gas or oil well is sunk, and into it are placed several concentric lines of pipe. Superheated water introduced through the outer pipe melts the sulphur, which may be several hundred feet below the surface. Hot compressed air is then forced through the smallest of the pipes. This forms an aerated emulsion with the molten sulphur, which is forced out by hydrostatic pressure between the remaining pipes and discharged in a purified form into large vats, where cooling, solidification and feeding go on simultaneously. The sulphur is then broken up, shipped by rail to the Gulf coast, loaded on ships by machinery and transported to Eastern coast ports.

Sulphur is of use both directly and indirectly to almost every individual in the country, for it touches vitally the fertilizing industry in an indirect way and fruit-growing more directly. In the form of pyrite it is extensively employed in the manufacture of sulphuric acid, which is largely used in the manufacture of phosphate fertilizer. An immense quantity of sulphur is used in bleaching wood pulp, the chief raw material of our newspapers. Match manufacturers, powder makers, sugar refiners and makers of rubber goods all use it, and as a drug it is well known.

The American people must be fed; crops must therefore be grown, and to grow good crops the ground requires fertilizers. Though very little is heard about the use of pyrite in the fertilizer industry, it nevertheless plays a very important part in the conversion of ordinary insoluble rock or "bone" phosphate into the soluble form, or "superphosphate." The pyrite must first be converted into sulphuric acid, which is often done at the fertilizer plant itself. Sulphuric acid, made largely from pyrite, is perhaps the chief among our commercial acids. It enters in diverse ways into the bulk of our industrial processes, and is turned out by the ton from our different chemical factories.

Though the United States produced in 1909 nearly 250,000 long tons of pyrite, valued at more than \$1,000,000, this quantity did not meet the domestic requirements, and the imports were nearly 700,000 long tons, valued at approximately \$2,500,000. As large deposits of pyrite are known in Virginia, California, New York and other States, it is to be hoped that these figures may be reversed in the not too distant future. Notes on the pyrite industry in the different States, together with tables of production, imports and consumption, are given in a report on "Sulphur and Pyrite," by W. C. Phalen, just issued by the United States Geological Survey as an advance chapter of "Mineral Resources" for 1909. It may be obtained free of charge by addressing the director of the survey at Washington, D. C.

McDowell Pocahontas Coal Co.

The McDowell Pocahontas Coal Co., mentioned last week as chartered with a capital stock of \$300,000, plans to develop 5000 acres of coal land. It proposes for the present to drill its property to determine the depth and thickness of the seams, and later to decide as to the development. A. St. Clair is president, and the main offices are at Tazewell, Va.

A report from Roanoke, Va., says that a decree of sale has been granted the creditors of the Virginia Anthracite Coal & Railway Co., and that the property, consisting of a railroad from Christiansburg to Blacksburg, Va., and the anthracite coal lands and mines around Merrimac will probably be sold in June.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

A \$300,000 Shook Factory.

One of the new extensive Southern woodworking plants is the shook factory which the Surry Lumber Co. of Baltimore completed several weeks ago at Berkley, Norfolk, Va. This plant cost about \$300,000, including land, power-house, docks, trolley system, etc. Its main building, the shook factory, is 200 feet long by 175 feet wide, and about 750 horse-power is required to drive the machinery. Equipment for the power plant was furnished as follows: General Electric Co., Schenectady, N. Y., turbine engines and electrical equipment; York Engineering Co., York, Pa., steam piping; Edgemoore Iron Works, boilers; Alberger Condenser Co., New York, condensers; Alphonse Custodis Company, New York, constructed circular brick stack. Box shook machinery was furnished as follows: M. B. Tidey, Newark, N. J., cut-off saws and saw tables; American Woodworking Machinery Co., fast-feed planers; Berlin Machine Co., Beloit, Wis., five horizontal resaws; General Electric Co., Schenectady, N. Y., motors; Linderman Machine Co., machines for dovetailing lengthwise and at the same time glueing the lumber.

The average capacity of the mill will be to cut up about 150,000 feet of lumber, board measure, per day. Everything in the factory is driven by electricity, with no steam or fire therein; even the glue is heated by electricity. All the lumber on the yard is handled by trolley system and delivered in the mill on trucks of about 40 feet capacity.

The methods by which shakes are made in this new factory are expected to bring about large economies over the old methods. They differ from the old in that in the old the first thing done with the lumber in the shook factory was to dress it and then resaw it. It passes through the mills in the resawn shape while being cut off, sized, and otherwise finished into shakes. In this new factory the first thing that is done with the lumber is that it is cut up into lengths to conform to the size of the boxes which are being made, then the lumber in its undressed state passes through the Linderman machine, joining two or more narrow pieces, weaving them into a wider piece, with joints so perfect as to make them almost imperceptible, and the last two operations in the new method are the first in the old. In the new it is dressed next to the last, the last being the resawing. Thus in the new mill the lumber passes all the way through the mill, being handled in its original thickness instead of the resawn thickness as in the old mills.

Before constructing this large plant the company bought the machinery and tried the plan in a commercial way. After this trial the new plant has been built, the company feeling fully justified in doing so by reason of the experience of the smaller plant which it had operated.

The site is located just across the Elizabeth River from the Portsmouth Navy-yard, and has about 1000 feet of water front, with a channel of 30 feet leading up to it. On the other side of this property is the Belt Line Railroad, connecting with all the railroads in Norfolk.

The construction of the power-house is brick, concrete and steel; the shook factory is regular slow-burning factory construction, with corrugated-iron sides and roof.

The company operates another shook factory at Dendron, Va., which has about

the same capacity as the Norfolk factory. It expects in due course that the Dendron factory will be remodeled to conform with the Norfolk plant, but plans for this have not been definitely made.

Miller-Vidor Mills' Output.

The Miller & Vidor Lumber Co. of Galveston has reorganized, and Ben H. Woodhead of Beaumont, president of the Beaumont Lumber Co. of Houston, has made a contract for his company to handle the output of the Miller-Vidor mills. It is understood the contract gives the Beaumont company exclusive control of about 110,000,000 feet of yellow pine lumber annually. The mills are located at Beaumont, Milvid, Timber and Orange, Tex. In the reorganization of the Miller & Vidor company A. W. Miller resigned as president and C. S. Vidor was elected president. K. Moore was elected vice-president and E. H. Green, Jr., secretary. It is stated that William Dixon, formerly sales manager for the Bering Manufacturing Co., will be connected with the Beaumont company hereafter as one of its vice-presidents. He will remain in Houston, covering his territory from this city. D. K. Newsum and J. W. Fisher will be the San Antonio representatives; Ed. G. Bowser at Fort Worth; Henry Klappenbach the Mexican territory, with headquarters at Eagle Pass, Tex. W. A. Priddis is general sales agent. The capital stock has been increased from \$100,000 to \$150,000 to extend selling territory. The company now sells in Canada, all over the United States, Mexico, Central America, Cuba and the West Indies. Its general offices are at Beaumont.

A \$2,000,000 Development Company.

The Byrd-Matthews Investment Co., St. Louis, Mo., has been incorporated with \$2,000,000 capital stock, and telegraphs the MANUFACTURERS RECORD that it proposes extensive timber operations in Northeast Georgia, but that plans are as yet indefinite. Dispatches state the company has purchased 26,000 acres of hardwood timber land in White county, Georgia; 50,000 acres of agricultural land in Zavalla county, Texas, and 4000 acres of cotton land in Duncan county, Missouri. The development plan includes cultivating the Missouri land, irrigating the Texas land and developing for lumber manufacturing the Georgia property, this latter development to include the construction of a 40-mile railway from Gainesville to Robertson. The company's officers will be: President, R. M. McCombs of Jackson, Mo.; vice-presidents, C. D. Matthews of Sikeston, Mo.; A. R. Byrd and J. H. Byrd of St. Louis, Mo.; secretary, E. R. Byrd, Jr.; treasurer, C. D. Matthews, both of St. Louis.

Wisconsin Company Will Build Big Plant at Laurel, Miss.

The MANUFACTURERS RECORD is advised that the Wausau Southern Lumber Co. of Arbor Vitae, Wis., is now preparing to build its proposed Laurel (Miss.) plant mentioned over two years ago in this column. This plant will have a capacity of 200,000 feet of lumber every 10 hours for cutting the timber from over 70,000 acres of long-leaf pine lands which the company owns and will develop. The first mill will include two 14-inch by 9-foot single cutting band mills, gang saw, heavy 12-inch horizontal resaw, and all necessary machinery. The mill and entire plant will be of steel and concrete fireproof construction, and contract for erecting the plant has been awarded to the D. J. Murray Manufacturing Co. of Wausau, Wis. The Wausau Southern Lumber Co. is capitalized at \$1,500,000, and its president is W. H. Bissell

of Wausau, who will have the active management of the company's business in Mississippi.

English Capitalists Reported Buying Southern Timber Properties.

F. L. Peck of Scranton, Pa., president of the United States Lumber Co., owning timber properties in Mississippi, wires the MANUFACTURERS RECORD "there has been no sale of our properties, and the reports to the contrary are entirely premature." This indicates that while the sale has not been effected, that negotiations are pending. The dispatches from Hattiesburg, Miss., bearing on the subject state that the United States Lumber Co. has given an option on its properties to an English syndicate, and that the same syndicate is reported to have secured an option on the Mississippi Central Railroad with a view to extending it from Hattiesburg to Pascagoula. Rumors also add that the New Orleans & Great Northern Railroad and the Great Southern Lumber Co.'s plant at Bogalusa, La., are under option to the same English people, the aggregate property under option, it is stated in these dispatches, being about \$26,000,000. Telegrams to the Great Southern Lumber Co. asking for confirmation or denial of these rumors have not up to the time of going to press been answered.

Central Hardwood Lumber Co.

The Central Hardwood Lumber Co. has been organized with \$100,000 capital stock and J. Edward Crusel, 1001 Hibernia Bank Building, New Orleans, is president. This company will build a band mill at Malbeouff, near the Atchafalaya River, on the new Southern Pacific Railway line between Baton Rouge and Lafayette. Its mill will manufacture cottonwood in large quantities, besides ash, oak and gum. Its daily capacity will be 30,000 feet of lumber. All the machinery has been purchased.

Lumber Shipments to Panama.

Large shipments of lumber were sent to Panama last week from New Orleans by the steamships of the United Fruit Co. of that city. They were destined mainly to Colon, where considerable lumber is required for rebuilding the structures destroyed by the fire of several weeks ago. Several of the ships were loaded with 100,000 feet of lumber, all the available space being used.

Veneer Plant Completed.

The Keego Veneer Co. of Brewton, Ala., has completed its veneer plant, which represents an investment of about \$3000. This plant is of mill construction, the veneer machinery costing about \$2500 and the other machinery about \$2000. It has a daily output of about 100,000 feet of box shooks. W. H. Strong is president of the company.

A Proposed Large Mill.

The Current River Tie & Lumber Co., R. T. Largent, general manager, has purchased the T. L. Wright Lumber Co. property, and during the summer will build another mill. This plant is to have a daily capacity within 50,000 feet of lumber, and the plans have not yet been made.

Plant to Cost \$65,000.

The Rodman Lumber Co., Rodman, Fla., has awarded contract for the erection of a mill to cost \$65,000. Its main building will be 44x218 feet, and its power-house 44x64 feet, of steel construction set on concrete. Its machinery will have a daily capacity of 100,000 feet of lumber.

MECHANICAL

Portable Telephone Sets.

Three accompanying views represent portable telephone sets used by railway officials in their private cars, inspectors who have to cover the line, train crews and construction, bridge and wrecking gangs. The advantages of the portable telephone set are striking. Communication can be established immediately between a distant point and headquarters by means of such a set carried on trains and connected to the telephone train wires by means of a line pole. In cases of emergency this one feature has more than paid for the total cost of the installation of the telephone circuit. Delays to traffic are reckoned in dollars and cents, and on important lines such delays are tremendously expensive. With a telephone at hand and the conductor or someone else able to give headquarters detailed advice in regard to conditions on the spot, hours



PORTABLE TELEPHONE SETS.

are frequently saved. Three of the sets in general use are those manufactured by the Western Electric Co. of 463 West street, New York, and Hawthorne, near Chicago, and known as Nos. 1330, 1331 and 1332 types. The first named is declared by the manufacturer to be the most efficient set on the market today. It is equipped with a powerful five-bar generator and finished with a special weatherproofed varnish. The construction is of the strongest throughout, and the corners are reinforced with steel. The hand set in this particular case is attached to a six-foot cord, so that the user may stand upright when the set is on the ground, and a push-button is provided in this hand set, so that the transmitter circuit is closed only when desired. The No. 1331 set is of similar design, but equipped with a three-bar generator. The No. 1332 set is for use on train wires where the dispatcher is at all times connected with the circuit, and it has no generator. Some railways are equipping every train on their line with these sets,

and their use on wreckers is very general. In some cases the portable telephone set is made part of the standard equipment of the engine. On the Seaboard Air Line some of the conductors recently petitioned to be allowed to purchase these sets for their own use out of their own pockets, so greatly did they appreciate the advantages of such apparatus in times of emergency.

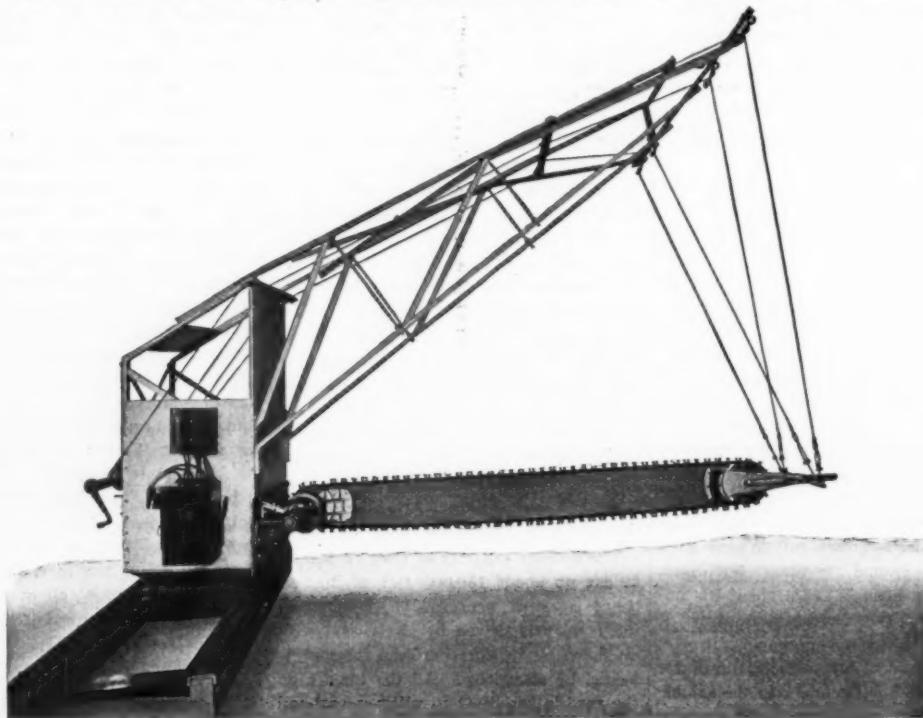
International Endless Chain Saw.

Before the invention and introduction of the endless chain saw the blade and teeth

sprocket wheel at each end, through which the endless chain runs. The chain consists of an endless band of steel links with teeth of standard form on one side, and the necessary projections or sprockets on the other side, which fit into grooves in the blade and receive power from the driving sprocket wheel at the pivotal end of the blade. The smaller saws are raised and lowered by means of an arched frame operated by rack and pinion and hand crank. The larger saws, from 4 up to 20 feet, are raised and lowered from the tower by

logs are floated to the saw and away at little expense, the saw cutting the logs in the water as readily as on the log deck. A 10-foot portable saw with gasoline engine has cut trees eight feet six inches in diameter at five minutes per cut with an interval of five minutes to move the saw for the next cut.

The portable felling saw outfit weighs complete about 500 pounds, and can be carried by three men. The trees when felled may be cross-cut into logs by turning the blade from horizontal to vertical



INTERNATIONAL ENDLESS-CHAIN CROSS-CUT SAW.

of saws were made in one integral part, so that the blade had to be reciprocated or revolved at the same speed as the teeth, with the disadvantage of requiring greater energy and less expedition in the work of felling trees or sawing up the logs and lumber. The construction of the International endless chain saw is apparent from an examination of the two illustrations herewith, one a tree-felling or stump-cutting machine and the other a log-cutting

means of wire cable attached to geared drums, hand-operated, the weight of the saw giving the required feed. Any form of power may be applied in the operation of these saws, but the most convenient for the portable machines is the gasoline or electric motor. The power required for the three-foot six-inch saw is seven horsepower, and for the two-foot saw, four horsepower. In the tree-felling and stump-cutting saw the blade is so arranged

position. In case of breakage of chain, it drops out entirely and only delays the work for a few minutes while replacing the damaged link. A spare chain is sent with each machine to allow for sharpening one while the other is in use. The power used for these machines may be detached and used for any other purpose desired. The saw may be used to cut cane, ice, etc.

The endless chain saw is manufactured by the International Endless Chain Saw



PORTABLE FELLING SAW.

machine for reducing logs to lumber lengths, shingle blocks, etc.

With the endless chain saw the blade is stationary and the chain which forms the teeth moves. Thus the minimum weight is moved and the motion is continuous and uniform, instead of back and forth, as in the old form of saw. The saw consists of a thin steel blade with a groove in its upper and lower edge, carrying a flanged

that it may be used at any angle and the saw may be lowered close to the ground and the felling may be done at either side. A 20-inch tree can be felled in 20 seconds and stumps cut at the rate of 120 in 10 hours. A six-foot six-inch cross-cut saw is now cutting cypress logs into shingle blocks near Abbeville, Ga., at a rate hitherto unattainable. These saws are also used on the edge of log pond, where the

Co., 34 University Place, New York, and catalogues fully describing the saw and machinery may be obtained by addressing the company.

"Wonderhoister" Portable Gasoline Derrick.

The hoisting machine herein described and illustrated is a gasoline derrick of the locomotive crane type, is portable and

built to save money for nearly all purposes where a hoisting machine is used. It consists of a direct connected gasoline engine and hoist with single or double drums mounted on a portable truck. The whole device is simple, compact, portable and economical, built of steel throughout, with either steel or wooden mast and booms, and is most economical in its operation.

Fig. 1 shows the "Wonderhoister" with a revolving mast, capable of working within a sector of 330 degrees. The derrick frame is a solid casting, and the mast and boom consist of latticed steel construction or of wood, as desired. Stay braces are

trenches it is handy and portable, and quick in operation, and is well adapted for stacking or handling timber and for bulky materials. It is used by railroad companies in freight terminals for unloading cars, and a good application of the machine is in handling coal, sand and gravel from barges or from trucks or wagons. The machine is a handy, economical apparatus for contractors, and when not in use for hoisting purposes it can be used on a contract for operating air compressors, small machinery, etc. It is made in any size, from one ton capacity to four tons, and from 6 to 25 horse-power, all being operated at a speed of 75 to 150

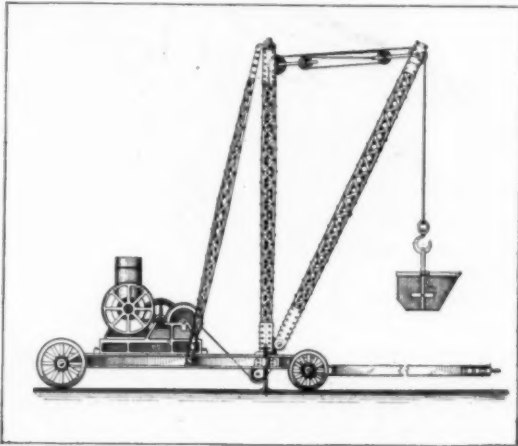


FIG. 1.—"WONDERHOISTER" PORTABLE GASOLINE DERRICK.

made of latticed structural steel, firmly bolted to the body or frame and held in place on the top of the mast by a machined steel casting containing a race of roller bearings. The foot of the mast is also a machined steel casting with a race of ball bearings. These machines are provided with cast steel bracing jacks properly bolted to each side of the body of the derrick, each made capable of sustaining a load of five tons. The engine consists of a vertical single cylinder engine with a "hit-and-miss" governor and "make-and-break" ignition of the four-cycle type, with engine, fuel tank and water tank contained in one

unit. The largest machine can be drawn from place to place by a single pair of horses.

This machine, as in Fig. 2, has afforded a saving on hoisting materials out of sewers alone of several thousand dollars to the Borough of Brooklyn, N. Y. The machines have been in constant operation in zero weather and in summer for a period of two years, and have been thoroughly tested.

They are manufactured and sold under patent rights by W. Van R. Whitall, Inc., 30 Church street, New York, which company also handles the complete "Lakewood

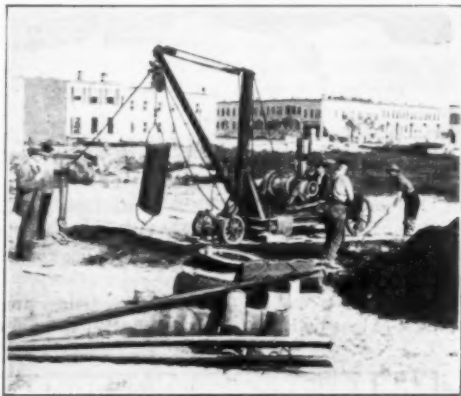


FIG. 2.—"WONDERHOISTER" AT WORK.

unit. It can be drawn from place to place by a pair of horses or propelled by its own power.

The builder states that the machine is so constructed that it is adaptable for all hoisting purposes at a very low cost. It operates at a speed of from 75 to 150 feet per minute, and is arranged for use with a simple bucket or with a plain hook for ordinary hoisting; also with a drum and counterweight for operating with a clamshell bucket, and with a bull wheel on the mast for self-swinging. The "Wonderhoister" is also adapted to conveying, hauling, excavating and unloading purposes. It is used by contractors for handling concrete, sand and gravel, and affords a big saving in the cost of laying sewers and water pipe. For excavating

"Built to Last" line of contractors' equipment.

The Gardner Crusher.

People interested in equipment for crushing, disintegrating and pulverizing should investigate the Gardner machine illustrated herewith. This machine is built by the Gardner Crusher Co. of 556 W. 34th street, New York, and is described as follows:

It is adapted for grinding any material, wet or dry, to any desired degree of fineness from one inch, to one hundred mesh. It can be fed with any size of stone, providing they pass through the opening, which is, for No. 1, 10x5 inches; for No. 2, 13x9 inches; for No. 3, 14x12 inches. In many cases with certain materials

the jaw crusher can even be suppressed. The Gardner crusher can be used as a single stage reduction machine, meaning that it can be fed with material direct from the quarry or from the jaw crusher, and in one operation this material is reduced to the desired fineness without the use of any accessory equipment. Nevertheless, for very fine and regular grinding the use of this crusher is advised as a preliminary crusher ahead of the tube mill.

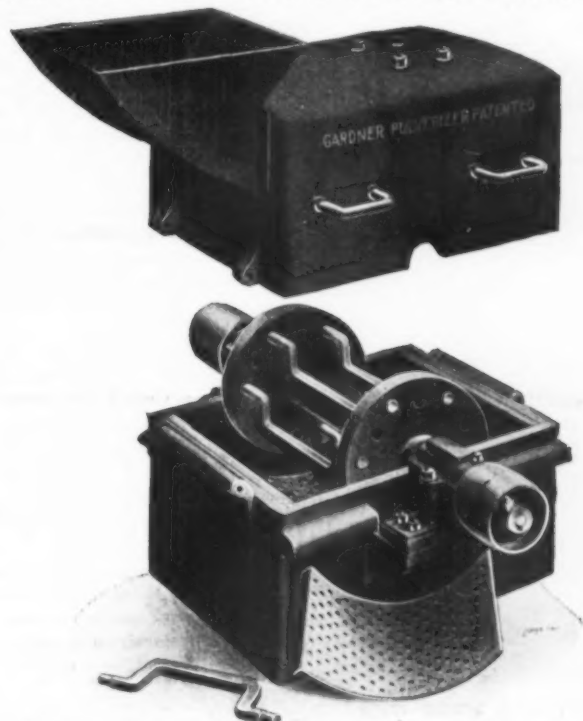
For example, with a very hard cement clinker we have attained the following results with our No. 1 machine:

| | Screen with 1/4-inch holes. | Screen with 1-16-inch holes. |
|---------------|--------------------------------|---------------------------------|
| Production... | 6000 lbs. per hr. | 4000 lbs. per hr. |
| 16 mesh..... | 98% | 100% |
| 20 mesh..... | 80% | 98% |
| 100 mesh..... | 40% | 70% |

If the method of treatment requires that the material have a high percentage of 20-mesh material and a low percentage of slimes, or if the contrary is required, these conditions can be met in the same mill by only changing the screens, which act only as a regulator for the fineness, and changing the speed. A regular feed not only improves the output of the mill both in quantity and in fineness, but also lessens the power required. The machine consists of a

any size; their wear is immaterial; one set will last more than a year. They are never clogged up. The top has on its inside movable ribs of extra hard metal, which can be moved down near the cranks in case of wear. This arrangement enables one to obtain products of greater or lesser fineness. The material is fed into the crusher through a mouth placed at the upper part of the top. This feeding can be performed either with shovels or by means of an automatic feeder. In this case the uninterrupted feeding of the machine will considerably increase the yield of the crusher.

The working of the thus constructed apparatus is very simple in theory, but very complicated in reality. At first sight it would seem that the materials fed into the crusher fall on the cranks, are crushed by the contact with the same and then pass through the hole of the grates and fall into the pit, where they are taken up by the elevator or carriers. If it were so the feeder would act only as a hammer mill and the hammers and screens would not last more than one day. A more minute examination shows that the operation is much more complicated. When a



GARDNER CRUSHER, DISINTEGRATOR AND PULVERIZER.

very strong cast-iron frame in two parts, the lower part being the base and the upper part the top. These parts are planed off on their contact surface, and fit perfectly together. In order to prevent the dust the top is connected to the base on both sides by hinges. This arrangement permits quick inspection and cleaning of the apparatus by simply stopping it, removing the belt and lifting the top. The crusher will then open like a box. The main shaft is on the lower part of the frame; it rests on two plumber blocks of special model, of large bearing and self ring oiling. These bearings are carefully built, and experience has shown them to be most serviceable. The shaft has a speed of 1000 to 1200 revolutions per minute. The main shaft has two check pieces, which are connected together by six articulated beaters in the shape of brace cranks. These beaters are the only part of the apparatus that wear. They are made of the best manganese steel obtainable. Their life is according to the hardness of the material, and varies from one month to one year. The bottom of the apparatus consists of a rounded, perforated iron plate, which acts as a screen for the discharge of the material. These screens can be made of

stone of a certain size falls into the apparatus it is seized at once by one of the cranks and broken into pieces. These moving cranks strike while in rapid motion, and by so doing act in a much more efficacious manner than would a rigid hammer of the same size driven by the same power. They break the stone while giving way to it, and the chips are immediately caught by the following crank, which acts on them with still greater force. Moreover, under the impulse the material is thrown against other pieces of the same character, and in the midst of the vortex of iron formed by the cranks a nucleus of matter to be crushed is produced, which is carried along by the centrifugal force, belabored and pounded as on a cyclone to such a degree that few particles thereof can escape without being reduced to fragments minute enough to pass through the fantastic sieve formed by the six whirling cranks. If the material to be crushed offers too much resistance the cranks, owing to their mobility, turn on their axes, by which they avoid breaking. It is to be observed also that the hammers never strike any part of the crusher. The explanation of the low motive power required in proportion to high yield lies in the fact that the cranks

form a flywheel in the manner of a thing storing working power, and that it is the impact and the friction on one piece of material against the other which does the work. Also in this crusher there is no part of it where the material to be crushed can act as a brake. The following fact in the working of the crusher may seem extraordinary: When striking by hand with a brace on a piece of corundum one will see this brace get dented and hammered as if it were lead. But in the crusher the same piece of corundum is easily reduced to powder. The reason for this is that under the action of the rapid rotation the crusher, also by the impact under the action of the centrifugal power, that the particles are reduced even more by mutual contact than crushed by the cranks. This explains also the little wear on the latter. A further proof of the cyclonic effect produced inside the apparatus is the passing of the particles through the grates. The discharge is effected with the greatest rapidity. The material is swept as by a windstorm on the surface of the perforated grates, and the combined action of the rotation thus imparted to them and to the centrifugal force drives them out of the apparatus as quickly as their degree of fineness permits.

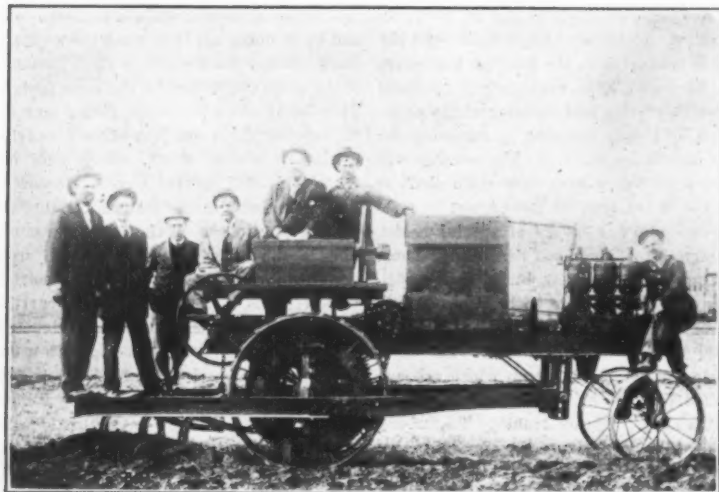
New Design Motor Plow.

Two accompanying views illustrate a new design of motor plow. This plow is built by



NEW DESIGN MOTOR PLOW.

the Wood-Knight-Hawk Co. of Oklahoma City. The company writes: "The plow weighs about 3000 pounds all told. It



NEW DESIGN MOTOR PLOW.

will plow about 25 acres every 10 hours. The pull is in front. The wheels cannot spin, because the pressure or suction of the plows when they are in the ground pulls

down on the rearwheels. We think this machine will revolutionize farming, as it can be manufactured and sold for about \$1000. We have just completed this model, and have made a few demonstrations. Beyond doubt it is a success. There is not a question of anything but supplying the demand. The plow is simple. The cost is in the motor; the other part is not of much importance. We have only a small motor, three cylinders, 5x5½. We think to pull from four to six plows we should have 5½x7½. Our machine is now in successful operation, pulling three plows (12-inch) with this small motor. This is simply trucks made of channel iron, the axles made of bar iron, covered by our patent."

New Commutating Pole Motor.

The severe service that electric motors are called upon to perform in many industrial power applications and the consequent necessity for reliability and efficient all-day operation requires the use of machines possessing exceptionally good commutation, overload and heating characteristics, combined with great mechanical ruggedness. The type "CVC" commutating pole motor just brought out by the General Electric Co. of Schenectady, N. Y., has been specifically designed to meet such requirements.

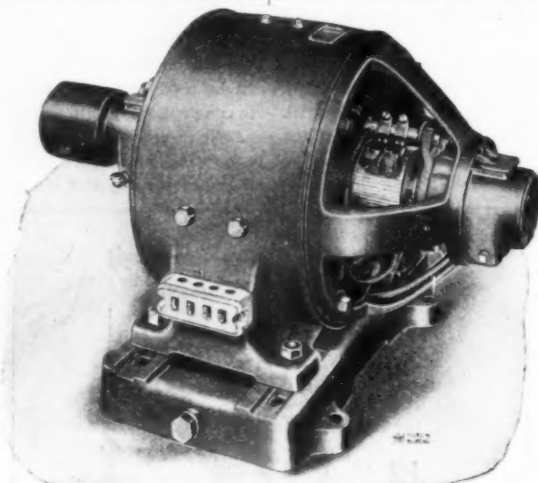
The "reason for being" of commutating pole design may be readily understood if it be remembered that sparking under the brush of a non-commutating pole direct-current machine is almost wholly due to the absence of a magnetic field, automatic in action and of sufficient intensity to reverse the armature coils successively short-circuited as corresponding segments pass under the brushes. The commutating poles of "CVC" motors are connected in series one with another, and also with the armature; their magnetizing power is, therefore, in proportion to the armature current, and may consequently be employed to compensate for armature reaction, allowing sparkless commutation over wide ranges of load and under adverse conditions of operation. In addition, commutating pole motors allow a wider range of speed control by field than is permitted with motors of non-commutating pole design. This is due to freedom from sparking, heating of commutator and brushes is reduced, minimizing attention and repairs and greatly increasing the life of these parts.

Due to reduced deposition of carbon and copper dust by wear, commutator and brush parts of "CVC" motors permit great cleanliness.

The speed curve of the "CVC" motor

Internal ventilation is secured by a very simple, rigid and durable form of fan, mounted on the armature shaft within the pulley end bearing head. This fan, while consuming a negligible amount of energy, insures cool operation under very severe conditions of temperature and load. Internal ventilation has been advantageously

one another and from the commutator shell by selected sheet mica, micrometer-gauged to a uniform thickness and of proper hardness to wear down evenly with the copper. The outer corners of the segments are rounded to prevent chipping of the mica, and the inner edges are notched out to prevent short-circuiting between the bars.



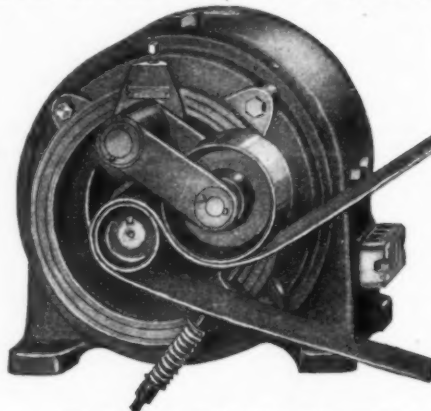
CVC MOTOR OF THREE HORSE-POWER.

applied to transformers, motor generator sets, etc., for a number of years. A similar application in motor practice is entirely logical, natural, and in step with the most advanced engineering practice.

The main field coils are wound on strong horn fiber spools, amply insulated with pressboard, mica, varnished cambric, etc., to insure freedom from breakdown under

There are small grooves in both the flat sides of the copper segments which serve, when the commutator is hydraulically pressed in its assembly ring, to firmly anchor the mica insulating segments, thus avoiding the possibility of high mica.

The bearing heads being interchangeable, the relation of the terminal block to the commutator and pulley end heads may

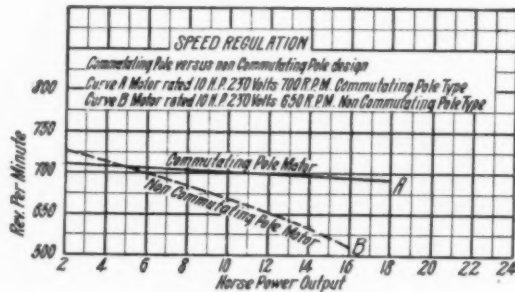


CVC MOTOR WITH BELT TIGHTENER.

possible excess potential strains. The windings are rendered moisture-proof by thorough impregnation with a special insulating compound. Before final assembly the coils are armor-wound with a single layer of enamel-covered wire, serving the double purpose of protecting the active windings from mechanical injury and assisting to a higher degree of heat radiation.

be shifted by removing the heads, turning the armature end for end and finally replacing the heads to correspond with the reversed armature position. It is thus possible to have the terminal block accessible under varying conditions of installation.

The bearing linings are large, and thorough lubrication is ensured by the use of



SPEED CURVE OF CVC MOTOR.

The commutating poles are wound with rectangular copper wire, the coils being assembled on horn fiber spools, which thoroughly insulate the coils from the pole pieces.

Special pains have been taken to so design the commutator that complete immunity will exist from loose or "high" bars. The commutator bars are insulated from

heavy oil rings of generous cross-section.

All bearing brackets and frames are drilled and tapped symmetrically, so that motors may be readily arranged for side-wall or ceiling suspension by turning the bearing heads 90 or 180 degrees, respectively, with relation to the frame. See three accompanying views.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

BRIDGES, CULVERTS, VIADUCTS

Ala., Russellville.—Franklin county will erect steel bridge across Big Bear Creek, on Military Rd.; S. J. Petree, Judge of Probate. (See "Machinery Wanted.")

Fla., Tampa.—City will construct bridge over Hillsborough River at Lafayette St.; Frederick T. Warren, City Engineer.

Ga., Perry.—Houston County Commissioners of Roads and Revenues are considering issuance of \$100,000 of bonds for improving bridges and roads.

Ky., Paducah.—Board of Public Works accepted bid (subject to ratification of General Council) of J. A. Omberg, Jr., Memphis, Tenn., at \$30,600 for construction of steel reinforced concrete bridge over Island Creek at 4th St.; L. A. Washington, City Engineer (Further particulars recently stated.)

La., Charenton.—H. A. Genung, chief engineer Iberia, St. Mary & Eastern Railroad Co., New Iberia, La., states that company is not ready for bids on draw span across Bayou Teche; plans not yet prepared. (Recently noted.)

Md., Baltimore.—State Roads Commission, Union Trust Bldg., will receive bids until May 10 for construction of concrete bridge in Montgomery county. (See "Machinery Wanted.")

Mo., Kansas City.—West Missouri Electric Railway Co., H. D. Patee, general manager, will construct three concrete girder bridges, 200 feet, 100 feet and 60 feet long, respectively. (See "Machinery Wanted.")

Mo., Rolla.—Missouri, Arkansas & Gulf

Railroad, Gilbert Lay, president, St. Clair, Mo., will erect two 125-foot wooden bridges in connection with proposed 125-mile line from Rolla to Bakersfield, Mo. (See "Machinery Wanted.")

N. C., Charlotte.—Piedmont Traction Co. and Greenville, Spartanburg & Anderson Railway contemplate construction of various bridges in North and South Carolina; bridge to be built across Catawba River at Mount Holly, N. C., is reported to cost \$60,000; W. S. Lee of Charlotte is vice-president of both companies. (Lately mentioned.)

Tenn., Clarksville.—Louisville & Nashville Railroad will rebuild trestle across Bud's Creek; work will be under supervision of Floyd Ingram, supervisor of bridges and buildings, Erin, Tenn.

Tenn., Memphis.—Shelby County Commissioners awarded contract to Memphis Bridge Co. at \$13,945 to construct bridge over Hatchie River at Flite Ave.; at \$3698 for bridge at Bell's Switch; at \$2385 for structure at Walnut Ave., near White Station, and at \$2995 for structure at Hurricane Creek, near Bartlett; Commissioners also awarded contract to W. F. Al'en at \$3497 to build bridge over Big Creek.

Va., Petersburg.—Matoca Bridge Co. incorporated with John A. Seay, president; Howard James, vice-president; Horace A. Holt, secretary; J. W. Old, treasurer; will construct wagon bridge across Appomattox River connecting Matoca, in Chesterfield county, with Ferndale, in Dinwiddie county; structure will be of steel; two spans; 250 feet long and 16 feet wide; 12 tons capacity; estimated cost \$7500. (Recently mentioned.)

CANNING AND PACKING PLANTS

Miss., Brookhaven.—Brookhaven Syrup Co. incorporated with \$30,000 capital stock by J. W. McGrath, Hiram Cassidy, I. Abrams and others; proposes to purchase and can molasses. (Recently mentioned.)

Mo., Nevada.—Hill Packing Co. incorporated with \$5000 capital stock by W. L. Addy, J. K. Hill and Lula B. Hill.

N. C., Gastonia.—C. S. Brown & Co., proprietors of Gaston Vegetable and Seed Farm, will establish cannery with present daily capacity of 1500 three-pound cans; building is 30x40 feet; will add sheds only for present business.

S. C., Greenwood.—E. F. Hogmer, Chicago, Ill., contemplates, it is reported, establishment of cannery costing \$6500; building is to be 30x100 feet, 30x68 feet of which is to be two stories high.

S. C., Edgefield.—J. C. Shepherd (recently reported interested) states that cannery plans are discontinued for the present.

Tex., Cuero.—The Cuero Packing Co. incorporated with \$10,000 capital stock by A. D. Edson, E. C. Hesse and Walter Reiffert.

Va., Richmond.—Fluvanna Packing & Live-stock Co. incorporated with \$4000 capital stock; M. C. Dalton of Richmond, secretary; J. A. Pearce, treasurer, Fork Union, Va.

CLAYWORKING PLANTS

Ark., Rector.—Brick and Tile.—Rector Tile & Brick Co. incorporated with \$5000 capital stock.

Md., Barton.—J. B. Williams and D. D. Price, Frostburg, Md., and Andrew Spier of Lonaconing, Md., contemplate manufacture of fire-brick. (See "Coal Mines and Coke Ovens.")

COAL MINES AND COKE OVENS

Ala., Birmingham.—Northern Kentucky Coal Mining Co. increased capital stock from \$25,000 to \$150,000.

Ark., Hartford.—T. O. Magness, Fayetteville, Ark., purchased 1000 acres of coal land and will develop.

Ky., Williamsburg.—Proctor Coal Co. will construct tunnel through Proctor Mountain and develop coal tract on Wolf Creek; tunnel will be 7 feet wide, 8 feet high and 8800 feet long; company will also install electrical haulway and electrical mining machinery and double capacity of electric power plant.

Md., Barton.—J. B. Williams and D. D. Price of Frostburg, Md., and Andrew Spier, Lonaconing, Md., purchased land near Barton; will develop coal; also prospect fire-clay with view to manufacturing brick.

Mo., St. Louis.—St. Louis Coal & Land Co. incorporated with \$50,000 capital stock

by D. G. Evans, Charles A. Lemp and Geo. L. Edwards.

Tenn., Nashville.—Perry-Lester Coal Co. incorporated with \$100,000 capital stock by Alexander Perry, John W. Morton, Jr., Tanner Hendrick and others.

Tenn., Memphis.—Hunt-Berlin Coal Co. incorporated with \$100,000 capital stock by W. T. C. Berlin, June H. Rudisill, W. J. Prescott and others.

Va., Tazewell.—McDowell Pocahontas Coal Co., A. St. Clair, president, will drill property to ascertain depth and thickness of seams; afterward determine development plans; 5600 acreage. (Recently noted incorporated with \$300,000 capital stock.)

W. Va., Charleston.—William R. Coal Co. (recently noted incorporated with \$24,000 capital stock by Harrison B. Smith and others) is holding company only.

CONCRETE AND CEMENT PLANTS

La., New Orleans.—International Railway Tie Co. organized to manufacture concrete railroad ties, etc.; capital stock \$300,000; Luke S. Boudreaux, president; Joseph C. Telotte, vice-president; Robert J. Perkins, secretary; Wm. Drews, Jr., treasurer; company has acquired patents (issued and applied for) for improvements to concrete railroad ties, etc.; also negotiating for contracts for wooden ties in home and Western territory.

COTTON COMPRESSES AND GINS

Ala., Troy.—Atlantic Compress Co., W. W. Robinson, manager, Atlanta, Ga., has closed contracts for machinery and equipment for compress recently noted under construction at Troy; cost of buildings and machinery about \$75,000; storage capacity, 5000 bales; daily compressing capacity, 1000 bales; frame building of sawtooth construction; area, 100,000 square feet.

Ga., Abbeville.—P. S. and W. C. Oliver and Oscar Cannon will erect sawmill; equipment consists of eight 70-saw gins with four to each side, boiler and two engines; machinery purchased at cost of \$10,000.

Miss., Scott.—L. K. Salisbury, Memphis, Tenn., and associates will build cotton ginning and compressing plant. (See "Land Development.")

Okla., Big Cabin.—Farmers' Gin Co. will establish two-system plant; open building proposals May 1; R. L. Sligleider, president; C. L. Ritchie, vice-president; E. J. McBride, secretary-treasurer. (Recently noted incorporated with \$5000 capital stock.)

Okla., Yeager.—Farmers & Merchants' Gin Co. will establish plant of 40 bales daily capacity; purchased machinery; will erect three buildings; lumber frame, steel sheeting; cost \$2000; date of opening building proposals not decided; T. P. Marsalas, president; S. P. Byers, vice-president; Chas. Burton, secretary, treasurer and manager. (Recently noted incorporated with \$7000 capital stock.)

S. C., Lake City.—Farmers' Union Ginning & Manufacturing Co. incorporated with \$2000 capital stock by W. L. Matthews, B. G. Timmons and E. A. Cook; will operate cotton gin, manufacture lumber and building materials, etc.

S. C., Pageland.—People's Gin Co. incorporated with \$10,000 capital stock by R. H. Blakener, P. H. Avant, A. F. Funderburg and S. B. Eubanks.

Tenn., Rutherford.—Rutherford Ginning Co. will enlarge cotton gin.

Tenn., Rutherford.—Hogenwood, O'Daniel & Co. and others will erect cotton gin.

Tenn., Rutherford.—Roberts Gin Co. will improve cotton gin.

Tex., Blessing.—J. E. Pierce awarded contract to A. Nelson, Palacios, Tex., to erect cotton gin; 20x60 feet; galvanized-iron sheeting; machinery purchased; daily capacity, 25 bales of cotton. (See "Machinery Wanted.")

Tex., Buffalo.—Barney Pearlstone awarded contract to J. H. Brown, Jewett, Tex., to erect cotton gin; galvanized iron; cost \$5000; machinery purchased; daily capacity, 60 bales of cotton.

Tex., Harlingen.—Gordon Hill will erect cotton gin and cottonseed oil mill.

Tex., Plainview.—J. N. Jordan will erect cotton gin.

Tex., Port Lavaca.—Port Lavaca Ice, Light & Power Co. contemplates installing cotton gin.

Tex., Teague.—H. B. Stubbs, Wortham, Tex., is promoting organization of company with \$30,000 capital stock to erect cotton compress.

COTTONSEED-OIL MILLS

Ala., Selma.—Alabama Cottonseed Oil Mill will improve plant at cost of \$25,000 to \$40,000; work begun.

Ark., Paragould.—East St. Louis Cotton Oil Co., National Stockyards, Chicago, Ill., has purchased machinery for plant and will erect mill-construction building by day's labor, superintended by company.

Miss., Scott.—L. K. Salisbury, Memphis, Tenn., and associates will build cotton-oil mill. (See "Land Development.")

Tex., Daingerfield.—Daingerfield Cotton Oil Co., W. T. Connor, Jr., president (recently noted incorporated with \$25,000 capital stock) will continue operation of established plant.

Tex., Harlingen.—Gordon Hill will erect cottonseed-oil mill and cotton gin.

DRAINAGE AND IRRIGATION

Ark., De Witt.—Arkansas County Commissioners awarded contracts for construction of two drainage canals; one to drain 18,923 acres, costing \$37,339.40, and other to drain 5049 acres, costing \$7873.96; contractors for former canal are J. W. Wright, T. W. Keaton and L. P. Bracy, one allotment each, and B. Capps and M. Rollison, four allotments; contractors for latter canal are A. A. Tindall and C. F. Frange.

La., Barataria.—Barataria Improvement Co. (Nathan Rosenberger, Muscatine, Ia., and others) will improve, drain and divide into small farms for settlement 5000 acres of land in Jefferson parish; about 800 acres of tract is at present in cultivation and balance in marsh and prairie land.

La., Franklin.—Franklin Drainage District voted \$40,000 bond issue for drainage canal construction. Address District Commissioners.

Mo., Carrollton.—Drainage District No. 3 of Carroll county will construct main canal and laterals; main canal to be 21 miles long; 1,170,000 cubic yards of excavation; bids received May 15; Brooks & Jacoby, civil engineers, 515 Shubert Bldg., Kansas City, Mo. (See "Machinery Wanted.")

N. C., Swanquarter.—Commissioners of Mattamuskeet Drainage District No. 1 have changed date of letting contract from May 4 to May 16; 83 miles of drainage canals; recently described; John P. Kerr, secretary Board of Commissioners; J. O. Wright, consulting engineer, Tallahassee, Fla. (See "Machinery Wanted.")

Tex., Edna.—Ball & Guges will construct drain ditch 6000 feet long, varying in depth from one to six feet, eight feet wide at bottom and containing 7200 cubic yards earth excavation; bids opened; W. C. Youngs of Edna is civil engineer.

Tex., Houston.—Missouri-Texas Land & Irrigation Co. has organized with H. P. Hilliard, president and treasurer; Henry L. Borden, vice-president and general manager; Chas. S. Oliver, secretary; S. A. Robertson, consulting engineer, San Benito, Tex.; plans for developing property not determined. (Previously noted incorporated with \$1,000,000 capital stock.)

Tex., Mercedes.—American Rio Grande Land & Irrigation Co. will extend canal systems over 20,000 additional acres.

Tex., Port Lavaca.—Bids will be received until April 29 for construction, excavation and building of all canals, ditches, laterals, bridges and concrete work in Drainage District No. 2; W. H. Crocker and others, Commissioners of Drainage District; W. C. Best, Clerk of Commissioners' Court. (See "Machinery Wanted.")

Tex., Zavalla County.—Byrd-Matthews Investment Co., A. R. Byrd, Jr., secretary, St. Louis, Mo., plans irrigation of 50,000 acres land. (See "Lumber Manufacturing," under Ga., Gainesville.)

ELECTRIC LIGHT AND POWER

Ala., Attalla.—Etowah Light & Power Co. will, it is reported, improve electric-light and water systems at cost of about \$50,000; has secured a 20-year franchise.

Ala., Montgomery.—Richard Tillis, care of Citizens' Light & Power Co., is building electric plant recently mentioned; plant is not

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

being built by Montgomery Traction Co., of which Mr. Tillis is understood to be owner.

Fla., South Jacksonville.—City voted issuance of \$60,000 of bonds for construction of electric-light system and water-works; R. O. Moore, chairman Board of Bond Trustees.

Ga., Atlanta.—Atlanta Hydro-Electric Power Co., 1014 Candler Bldg., is completing plans to begin construction of water-power-electric plant; estimates expenditure of \$3,000,000 for construction of high dam and powerhouse, installation of machinery for developing 30,000 horse-power, and construction of transmission line to Atlanta. (Previously reported incorporated.)

Ga., Barnesville.—City voted issuance of \$15,000 of bonds for extension of electric-light plant, etc. Address The Mayor. (See "Water-works.")

Ga., Buchanan.—City will construct electric-light plant; G. N. Moore and H. S. McCalman, committee in charge of purchase and installation.

Ga., Oglethorpe.—City will open proposals about July 1 for electric-light and water plants construction; engineer not selected. Address C. A. Allison. (Previously noted to vote April 12 on \$18,000 bond issue for electric-light and water-works construction.)

Ga., Vidalia.—City contemplates improving electric-light plant; will install additional dynamo and other machinery. Address The Mayor.

Ky., Lexington.—Lexington Railway Co. advises Manufacturers Record that plans for new power-house will not be completed for several months. (Previously noted.)

Ky., Williamsburg.—Proctor Coal Co. will double electric-power plant. (See "Coal Mines and Coke Ovens.")

Md., Baltimore.—Consolidated Gas, Electric Light & Power Co., Continental Bldg., has begun work on erection of storage-battery plant on McClellan Al., between Baltimore and Fayette Sts.; building will be two stories high, with basement, 40x100 feet, and built of concrete, brick and steel; storage battery, contract for which has been awarded, will be capable of lighting 240,000 tungsten lamps of 20 candle-power each; building will cost \$50,000 and storage battery \$250,000, making total expenditure \$300,000, exclusive of site. (Mentioned in February.)

Miss., Tupelo.—City voted issuance of \$50,000 of bonds for improvement of electric-light plant, etc.; C. E. Goodlett, clerk. (See "Road and Street Work.")

Mo., Chillicothe.—City will receive bids May 8 for construction of municipal electric-lighting and power plant; plans and specifications on file at offices of City Clerk and of Fuller-Coulter Company, engineers, Chemical Bldg., St. Louis, Mo.; estimated cost \$50,000; bonds and plans previously noted. (See "Machinery Wanted.")

N. C., Fort Caswell.—Construction Quartermaster R. O. Edwards opens proposals April 27 for electric-light and power-plant equipment; machinery to include two 53-horsepower steam engines, etc. (See "Machinery Wanted.")

N. C., North Wilkesboro.—Gordon Industrial Corporation incorporated with \$100,000 capital stock by R. N. Hackett, J. G. Hackett and J. M. Turner.

N. C., Oxford.—Oxford Electric Co. incorporated with \$15,000 capital stock by A. H. Powell of Oxford, Richard C. M. Calvert of College Park, Md., and Charles F. Nesbit of Washington, D. C.; will furnish electric power and lighting and gas.

Okla., Kingfisher.—City voted issuance of \$28,000 of bonds for enlargement of electric-light plant and extension of water-works; electric-light system will be changed from single-phase to three-phase; V. H. Francis, superintendent of light and water plant.

Okla., Altus.—Southern Electric Co. incorporated with \$10,000 capital stock by M. E. Woolridge, W. R. Kimberlin and E. E. Fra-weekmall.

Okla., Oklahoma City.—Butts Electric Co. incorporated with \$5000 capital stock by W. B. Butts, C. B. Dillingham and G. G. Grimes, all of Oklahoma City; L. C. Butts of Shawnee, Okla.

S. C., Lexington.—Lexington Electric Light & Power Co. incorporated with \$10,000 capital stock; W. W. Barre, president; B. H. Barre, secretary-treasurer.

Tenn., Memphis.—Legislature has authorized city to vote on issuance of \$1,000,000 of bonds to purchase or build electric-light plant; Heskell Weatherford, City Engineer. (Recently mentioned.)

Tenn., Ridgedale.—Eastern Tennessee Power Co., Parksville, Tenn., will erect substation at Ridgedale, where electricity, transmitted from plant on Ocoee River (where total of 32,000 horse-power will be developed), will be

received and transformed for lighting, railway and commercial purposes; building and machinery will cost about \$75,000; engineers, J. G. White & Co., 43 Exchange Pl., New York.

Tex., Hearne.—City voted issuance of bonds for construction of electric-light plant. Address The Mayor.

Tex., Longview.—City voted bond issue of \$30,000 for electric-lighting facilities, paving, etc.; G. A. Bodenhelm, Mayor. (Recently noted.)

Tex., Mission.—Mission Land & Improvement Co. contemplates construction of electric-light plant.

Tex., Port Lavaca.—W. E. Shell petitioned City Commissioners for franchise for electric-light system and water-works.

Tex., Troup.—R. C. Schumate, Zephyr, Tex., purchased electric-light plant and will improve.

Va., Hampton.—Newport News and Old Point Railway & Electric Co., W. J. Payne, president, Richmond, will improve power plant; has ordered and will install 575-horsepower boiler. (Recently mentioned.)

W. Va., Wheeling.—Consumers' Electric Co. and Wheeling Electric Co. consolidated as Wheeling Electric Co. (Consumers' Electric Co. recently noted to construct power-plant costing \$700,000 to \$900,000.)

FERTILIZER FACTORIES

Fla., Jacksonville.—Fertilizers.—Wilson & Toomer Fertilizer Co., Lorenzo A. Wilson, president, has purchased machinery, supplies and materials for all proposed improvements; is completing enlargement of plant and installation of larger power plant at cost of about \$65,000; also installing new furnaces and enlarging acid plant at approximate cost of \$30,000. (Recently noted.)

Ga., Augusta.—International Agricultural Corporation, 165 Broadway, New York, will increase capital stock from \$24,000,000 to \$36,000,000; owns chain of factories in South. (Recently reported as to build Augusta plant.)

FLOUR, FEED AND MEAL MILLS

Mo., Eldorado Springs.—Eldorado Milling & Grain Co. incorporated with \$10,000 capital stock by William H. Anthony, Millie A. Anthony, T. E. Edlemore and others.

Mo., Kansas City.—Nelson Grain Co.'s building is of mill construction; 195x130 feet; all contracts let; stone work completed; construction engineer, Chas. Henry, 14 S. 11th St., Kansas City, Kans.; machinery practically bought; company manufactures grain and mill products; 2000 sacks per day chop. (Building previously noted to be erected at cost of \$87,000.)

N. C., Asheboro.—Southern Milling Co. incorporated with \$25,000 capital stock by C. L. Cranford and Virgil Presnell.

FOUNDRY AND MACHINE PLANTS

Ark., Stuttgart.—Machine Shop, etc.—Roush-White Foundry & Machine Co., H. F. Roush, president, now of East Walnut St., Hillsboro, O. (Stuttgart after June 1), will establish recently-noted plant; 80x30-foot building will be erected by Commercial Club; machine shop and iron and brass foundry equipment will be installed at cost of about \$10,000; daily capacity pump work and general repairs, five tons; Starling White, manager. (See "Machinery Wanted.")

La., Covington.—Clarifying Machines.—Sanford Clarifying & Separating Co. organized with \$2,500,000 capital stock to manufacture cane juice, syrup and molasses clarifier invented by George E. Sanford of Covington, who is first vice-president of company; president, Frank Schaffer; second vice-president, William C. Eakins; secretary-treasurer, Alfred E. Saurel, all of New York; offices at 81 Wall St., New York.

Okla., Bartlesville.—Foundry, etc.—Bartlesville Machine Co., H. G. Durnell, manager, acquired buildings and equipment of Bartlesville Machine & Foundry Co.; organization not complete; officers yet to be elected; will erect two fireproof brick buildings, about 65x30 feet each; was recently noted organized by Geo. C. Priestly, Mr. Durnell and others. (See "Machinery Wanted.")

Okla., Oklahoma City.—Plows.—Wood-Knight-Hawk Company will be incorporated with \$400,000 capital stock by H. D. Knight, J. B. Wood, Homer H. Dunlap and F. J. Hawk; will establish plant to manufacture plows at cost of about \$250,000. Mr. Knight will be president. For the present company will place orders for manufacture of plows. (See "Machinery Wanted.")

Tex., Houston.—Hay Presses.—Southern Hay Press Manufacturing Co., Silver Creek,

Miss., will establish hay-press factory; first buildings will be temporary, being ironclad, 50x150 feet, 30x100 feet, 40x40 feet and 20x20 feet, respectively.

Tex., Lufkin.—Mill Supplies, etc.—Lufkin Foundry & Machine Co., J. H. Kurth, president, increased capital stock to \$300,000 to facilitate handling of larger business; contemplates erection next year of supply warehouse; recently completed improvements to foundry, machine shop, etc. (Lately mentioned.)

Va., Richmond.—Stoves.—Bureau Stove Co. incorporated with \$50,000 capital stock to manufacture stoves; G. M. Smithdeal, president; Preston Cobb, vice-president; Joseph P. Sadler, secretary-treasurer; purchased patent for "Bureau Stove"; has building and foundry in South Richmond; capacity not yet estimated.

W. Va., Parkersburg.—Oil-well Supplies, etc. Spence, Smith & Kootz will erect one-story 60x120-foot, 24-foot high building and 30x60-foot two-story building; structural steel; contract not awarded; machinery supplied; manufactures marine boilers, brushings and stacks, self-supporting stacks, barges, tankage, standpipes, etc.; W. S. Smith, manager.

GAS AND OIL DEVELOPMENTS

Miss., Laine.—Pascagoula Development Co. awarded contract to D. J. Johnson, formerly of Covington, La., for drilling oil well in connection with development of 156 acres of oil deposits; organization of company not complete. (Recently reported incorporated with \$15,000 capital stock by Frank H. Lewis, O. H. De Lamorton and others.)

Okla., Elmer.—Elmer Oil & Development Co. organized with \$75,000 capital stock; has leases on 5000 acres of land, and will drill for oil; J. G. Bickly is president; C. W. Craig, vice-president; Everett Petry, secretary; Joseph Crump, treasurer.

Okla., Sapulpa.—Indian Fuel & Gas Co. incorporated with \$100,000 capital stock by V. C. Hogan, R. W. Coe and C. F. Robertson, all of Kiefer, Okla.

Okla., Stroud.—Springdale Oil & Gas Co. incorporated with \$10,000 capital stock by John B. Black, Charles F. Lawrence, William W. Pierce and Eli W. Black of Stroud, and John W. Cox of Avery, Okla.

Okla., Tulsa.—Sycamore Oil & Gas Co. incorporated with \$50,000 capital stock by P. W. Clark, C. M. Williams and J. H. Larson.

Okla., Tulsa.—The Gibbons Oil Co. incorporated with \$5000 capital stock by E. L. Wetherbee, W. A. Gibson and A. C. Porter.

Okla., Waurika.—Red Beds Oil & Gas Co. incorporated with \$50,000 capital stock by W. G. Park, Houston, Tex.; H. W. Lemons, Waurika, and B. C. Epperson, Dallas, Tex.

Tenn., Winchester.—J. L. Gilton, 10 and 11 Phillips Block, is organizing oil and gas company; has two gas wells in operation and one well producing lubricating oil; contemplates further drilling. (See "Machinery Wanted.")

Tex., Navasota.—Bowen Oil Co. incorporated with \$10,000 capital stock by T. E. Bowen, Joel Terrell, C. C. Camp, Ed Woodward and W. M. Woodward.

W. Va., Charleston.—Kanawha Royalty Co. incorporated with \$25,000 capital stock by C. C. Wiley, R. R. Richmlee, I. M. Riley, E. R. Yates and M. E. Spradling.

W. Va., Harrisville.—Beddick Oil Co. will develop 466 acres of oil property; drill three or four wells, lay pipe lines and build stations; L. R. Snodgrass is secretary. (Recently reported incorporated with \$10,000 capital stock.)

ICE AND COLD-STORAGE PLANTS

Ala., Foley.—Beckwith & Pepper will install ice plant.

Fla., St. Andrew.—St. Andrew Ice & Power Co. will enlarge ice plant, increasing capacity to 40 tons; building will be 71x56 feet with 23-foot galvanized-iron machine shop; concrete foundation; smokestack 30 inches in diameter and 75 feet high; machinery to be installed will include 30-horsepower steam-exhaust plant, evaporator system, steel freezing tank insulated with cork, traveling ice hoist, 125-horsepower boiler, etc.; construction work has begun under supervision of O. R. Harding.

Ga., West Point.—West Point Iron Works will install ice plant; capacity 25 tons daily.

S. C., Hartsville.—J. L. Coker & Co. awarded contract to Jamison & Morrison, Greenville, S. C., for erection of refrigerating plant building; 30x60 feet; brick walls; one floor tile; cost \$10,000; plans by Wilson & Sompayrac, Columbia, S. C.

Tex., Mission.—Mission Land & Improvement Co. is interested in erection of ice plant.

LAND DEVELOPMENTS

Ala., Birmingham.—Industrial Land & Improvement Co. incorporated with \$6000 capital stock; G. T. Wofford, president and treasurer; G. R. Trafford, vice-president; G. R. Godwin, secretary.

Ala., Grand Bay.—Grand Bay Land Co., J. H. Reichert, president, purchased 7000 acres of land. (Recent report, under Mobile, Ala., was incorrect.)

Ala., Montgomery.—National Realty & Investment Co. incorporated with \$75,000 capital stock; Arthur A. Madison, president; G. P. Madison, vice-president and treasurer; Thomas Hope, secretary.

Fla., Dade City.—Dade City Land Co. incorporated with \$250,000 capital stock to develop 23,000 acres of land; property is to be divided into small tracts and sold to settlers; Thomas J. Morris, president and general manager; H. O. Snow, vice-president, and Charles H. Brown, secretary-treasurer, all of Tampa, Fla. (Recently mentioned.)

Fla., Jacksonville.—Florida Ostrich Farm, Charles D. Fraser, manager, will build amusement park, to be equipped with scenic railways, roller coasters and other amusement devices.

Ga., Atlanta.—Holmes & Verner and E. T. Luckie purchased 30 acres for \$40,000; will divide into lots and develop as residential section.

La., New Orleans.—Louisiana Farm Land Co., C. H. Willard, president, purchased property about 25 miles from New Orleans and will develop as summer residential park to be known as Lacombe Park.

Miss., Biloxi Park.—Commercial Club, Civic League and others will construct playground near railroad depot.

Miss., Greenwood.—Mississippi Cotton Co. incorporated with \$100,000 capital stock by S. F. Jones, R. F. W. Baird, T. F. Steele, T. G. James and others.

Miss., Iuka.—J. Cary Thompson, Birmingham, Ala.; W. A. Kelly of Iuka and associates plan improvement of 1000 acres as club resort to be known as Tishomingo Country Estate; betterments will include lake covering 20 acres with depth of 10 to 38 feet; boat-houses along lake, clubhouses, roadways, etc.; dam for lake will require removal of 30,000 yards of dirt; also planned to secure game preserve of about 1500 acres within short distance of estate; Whildon & Price, Birmingham, Ala., prepared plans for buildings; L. H. Salter, civil engineer for grounds, etc. (Previously mentioned.)

Miss., Scott.—Cotton Plantation.—L. K. Salsbury, A. S. Buchanan, Rice Fant and George H. Tucker of Memphis, Tenn.; William M. Anderson of Jackson, Miss., and George B. Bell of Chicago, Ill., purchased 32,000 acres cotton land in Bolivar and Washington counties; organized two corporations capitalized at \$1,500,000 each to take over land and develop by scientific cultivation of cotton; will invest \$1,000,000 for general improvements, including clearing land, erecting cotton ginning and compressing plant and cotton-oil mill; property bonded in England; executive offices at Memphis; address Mr. Salsbury. (Recently mentioned as negotiating, etc.)

Miss., Poplarville.—Louis Damon, representing Chicago capitalists, will, it is reported, clear 200 acres of cut-over pine lands and plant sugar cane.

N. C., Fayetteville.—Pineville Farm Co. incorporated with \$50,000 capital stock by W. F. Smith, C. W. Sandrock and H. O. Pond.

N. C., Gastonia.—Gaston Land & Manufacturing Co. incorporated with \$100,000 capital stock by Thomas L. Craig, W. T. Love, S. N. Boyce and others.

N. C., Southern Pines.—North Carolina Land Co. incorporated with \$100,000 capital stock by Archie H. Kerr of Southern Pines; William E. Silverthorne, Simon B. Chapin and Oliver P. Cooke, all of New York, and I. K. Nimocks, Fayetteville, N. C.

S. C., Florence.—Black Creek Land Co. organized with \$50,000 capital stock by John L. Barringer and P. Alston Wilcox.

S. C., Greenville.—Greenville Suburban Land Co. incorporated with \$25,000 capital stock to develop 26 acres as suburban residential section; property is to be divided into residence lots, and improvements will be made, including electric-light plant, sewerage system, water system and cement sidewalks; Raven I. McDavid, president; C. S. Webb, vice-president; John B. Marshall, second vice-president; T. F. Hunt, secretary-treasurer.

Tex., Fort Worth.—Andanna Land Co. incorporated with \$5000 capital stock by A. F. Heng, F. D. McNaughton and Charles T. Rowland.

Va., Danville.—Danville Development Co.

Incorporated with \$50,000 capital stock; C. W. Smith, president; F. W. Davis, vice-president; W. C. Wing, secretary-treasurer.

Va., Norfolk.—Morgan R. Ellis and A. Cheatwood of Richmond, Va., and J. W. Hope, Hampton, Va., purchased 650 acres near Buckroe Beach on Chesapeake Bay and will establish resort; improvements will include 200-room fireproof hotel, three-mile boardwalk, pier, pavilion, clubhouse, power station, number of cottages, four-mile railroad to make direct connections from Hampton and excursion steamer line from Norfolk to resort; initial investment will be about \$200,000.

Va., Richmond.—Forest View Land Co. will be incorporated to develop 121 acres of land as suburban residential section; property is to be divided into lots, streets constructed and other improvements made. Richard Taylor of Monticello Lithia Co. will be treasurer.

Va., Shipman.—Orchard.—Red Apple Orchard Corporation incorporated with \$50,000 capital stock; W. A. Currie, vice-president, Minneapolis, Minn.; R. M. Sherman, secretary and treasurer, Shipman; company owns 100 acres, and contemplates development in winter-apple orchards; 100 acres set out this spring; additional setting contemplated for fall.

W. Va., Wheeling.—Home Acres Co. incorporated with \$25,000 capital stock by John H. Wells, Richard Robertson, Charles J. Wolf and others.

LUMBER MANUFACTURING

Ala., Pansey.—Rocky Creek Lumber Co. incorporated with \$200,000 capital stock by William G. Phillips of Pansey; William T. Davis, John R. Thomas, D. L. Fickes and G. A. Bender, all of Scranton, Pa. (Mentioned recently.)

Fla., Rodman.—Rodman Lumber Co. awarded contract for sawmill buildings; main structure 44x218 feet; power-house 44x54 feet; steel construction set on concrete; machinery will have daily capacity 100,000 feet lumber; total cost plant \$65,000. (Mentioned recently.)

Ga., Gainesville.—Byrd-Matthews Investment Co., St. Louis, Mo., incorporated with \$2,000,000 capital stock; telegraphs Manufacturers Record that company is planning extensive timber operations in northeast Georgia, but plans are indefinite; is reported to have purchased 25,000 acres of hardwood timber in White county and as to construct 40-mile railway from Gainesville to Robertson; also reported to have purchased 50,000 acres agricultural land in Zavalla county, Texas, and 4000 acres cotton land in Duncan county, Missouri; plans to irrigate Texas land; will organize with following officers: President, R. M. McCombs of Jackson, Mo.; vice-presidents, C. D. Matthews of Sikeston, Mo.; A. R. Byrd and J. H. Byrd of St. Louis, Mo.; secretary, E. R. Byrd, Jr.; treasurer, C. D. Matthews, both of St. Louis.

Ga., Savannah.—Floyd's Neck Land & Timber Co. incorporated with \$25,000 capital stock by J. R. Paschall, W. C. Parker, Jr., and K. D. Steere.

Ga., Valdosta.—T. G. Cranford Lumber Co. incorporated with \$30,000 capital stock by T. G. Cranford, J. G. Cranford and others.

La., New Orleans.—Ties.—International Railway Tie Co., Luke S. Boudreaux, president (recently noted incorporated with \$300,000 capital stock), is negotiating for contracts for wooden ties; also in connection with proposition to manufacture concrete railroad ties. (See "Concrete and Cement Plants.")

Miss., Folwell, P. O. at Monticello.—Company lately reported as to build lumber mill can be addressed at Monticello; will erect mill equipped with circular, gang and band saws, water-works, machine shop, etc.; C. W. Robinson is president. (Other details mentioned recently.)

Miss., Laurel.—Wausau Southern Lumber Co., Arbor Vitae, Wis., will erect plant with 10-hour capacity of 200,000 feet of lumber; first mill will include two 14-inch by 9-foot single-cutting band mills, gang saw and heavy 12-inch horizontal resaw, with all necessary machinery; erect entire plant of steel and concrete fireproof construction; develop over 70,000 acres long-leaf pine timber land; contract for erecting plant awarded to D. J. Murray Manufacturing Co., Wausau, Wis.; Wausau Company is capitalized at \$1,500,000; W. H. Bissell, president, Wausau, Wis., will have active management of Mississippi plant. (Previously mentioned.)

Miss., Pelahatchie.—Smith-Payne Lumber Co. incorporated with \$30,000 capital stock by P. L. Baird, S. P. Payne, L. J. Smith and others.

Mo., Doniphan.—Current River Tie & Lumber Co., R. T. Largent, president and gen-

eral manager, purchased property of T. L. Wright Lumber Co.; equipment practically sufficient for present use during summer; will erect new mill, for which plans are not made; capacity to be within 50,000 feet daily. (Recently noted incorporated with \$30,000 capital stock.)

Mo., St. Louis.—Louis Werner Sawmill Co. increased capital stock from \$150,000 to \$200,000.

N. C., Newbern.—North East Lumber Co. incorporated with \$50,000 capital stock by Larry I. Moore, William Dunn, Jr., and C. W. Pettit.

Okla., Page.—Buschow-Blackwell Lumber Co. incorporated with \$30,000 capital stock by Oliver C. Buschow and Eugene Blackwell, Page; Charles Buschow, Colby, Kans.; C. F. McKnight, Oklahoma City, Okla., and A. A. Buschow, Rexford, Kansas.

S. C., Lake City.—Farmers' Union Ginning & Manufacturing Co. incorporated by W. L. Matthews and others. (See "Cotton Compresses and Gins.")

S. C., Lumber.—Williams-McKelthan Lumber Co. will rebuild lumber plant recently reported burned; reported that new sawmill will be double-band and resaw mill with capacity of 70,000 to 80,000 feet daily and cost \$90,000; James Mortimer, superintendent.

Tenn., Maibeuff (not a postoffice).—Central Hardwood Lumber Co. organized with J. Edward Crusel president, to install band-saw mill of 30,000 feet daily capacity; on new Southern Pacific Railway line between Baton Rouge and Lafayette; will manufacture hardwood timber, including cottonwood, ash, oak and gum; machinery acquired; all communications for the present to be addressed to Mr. Crusel, 1001 Hibernia Bank Bldg., New Orleans, La.

Tenn., Fentress County.—Davidson, Hicks & Greene Company, Nashville, Tenn., purchased 10,000 acres of poplar, white oak and pine timber in Fentress county; purchase price, about \$90,000; will operate in connection with present mills and railroad equipment; no machinery needed.

Tenn., Nolita.—J. L. Boggs, Lenoir City, Tenn., and others will install sawmill to develop 400 acres of timber land; are building town to be known as Boggsville.

Tex., Daingerfield.—The Cypress Co. incorporated with \$9000 capital stock by J. M. Henderson, Nawinto McDonald and Ralph M. Love.

Tex., Todd.—Harvey Clark Lumber Co. incorporated with \$10,000 capital stock by J. H. Clark, J. C. Knebel and M. W. Harvey.

Tex., Waco.—William Cameron & Co. will establish lumber-manufacturing plant; purchased tract of land.

Va., Bristol.—Wilkinson Lumber Co. incorporated with \$10,000 capital stock; J. A. Wilkinson, president; M. V. Wilkinson, secretary-treasurer.

W. Va., Pecks Mill.—Mill Creek Lumber Co. (recently reported incorporated with \$25,000 capital stock) will operate lumber plant of 15,000 feet daily capacity; oak, poplar and maple; Michael Kramer, president and treasurer; H. K. Schocke, vice-president; George Minister, secretary and manager.

METAL-WORKING PLANTS

Mo., Kansas City.—Brass.—Star Brass Works Co. increased capital stock from \$10,000 to \$30,000.

MINING

Ark., Benton.—Benton Mining & Reduction Co. incorporated with \$45,000 capital stock.

Ga., Augusta.—B. C. Banks, Savannah, Ga. (one of incorporators) states that American Granite Co. has secured granite-quarry interests, which will be consolidated, and operate with improved machinery. (Recently noted incorporated with \$900,000 capital stock by Wm. F. Bowe, C. F. McKensie and others.)

Mo., Carthage.—Dixie Mining & Manufacturing Co. incorporated with \$10,000 capital stock by O. W. Stone, C. H. Laflamboy and John Durly.

Mo., Joplin.—Lead and Zinc.—Spring City Lead and Zinc Co. incorporated with \$60,000 capital stock by U. G. Wilson, Adams Cott, George R. Payne and others.

Mo., Joplin.—Bucyrus Mining Co. (Jesse Short and others) will develop mining property at Thoms Station.

Mo., Neek.—Neck City Drilling & Mining Co. incorporated with \$12,000 capital stock by C. C. Yoder of Neek; W. R. Shuck, Webb City, Mo.; Charles F. Mauch, W. A. Ehrler and George C. Linde, all of St. Louis, Mo., and others.

Okla., Davis.—Lone Tree Mines Co. incorporated with \$40,000 capital stock by Geo. R. Ennisson of Davis, C. E. Sillix and E. A. Hill, Sulphur, Okla.

Tex., Waco.—Waco Land, Mining & Fuel Co. incorporated with \$60,000 capital stock by Eugene Early, W. M. Foster, Sam Sanger and others.

Va., Danville.—Mica.—G. B. Robertson is interested in plan to mine mica. (See "Machinery Wanted.")

Va., Mendota.—Sand.—Reynolds White Sand Co. will make improvements at sand mines.

MISCELLANEOUS CONSTRUCTION

D. C., Washington.—Mer.—Sanford & Brooks Company, 24 Commerce St., Baltimore, Md., has contract to rebuild pier at foot of 7th St., used by Naval Battalion, District National Guard; cost about \$7000; work includes dredging to make 16 feet of water for ship's berth.

La., Bunkie.—Canal.—Bunkie and Bayou Dulac Canal Committee awarded contract to S. J. Burlin, Cottonport, La., at \$22,700 to construct proposed canal and road from Bunkie to Bayou Dulac.

La., New Orleans.—Orleans Levee Board, Sidney F. Lewis, collector, contemplates additional expenditure of \$1,000,000 to complete improvements planned for levee system in New Orleans harbor; Col. William T. Russell, acting president of Mississippi River Commission.

Md., Baltimore.—Fanhouse.—Philadelphia, Baltimore & Washington Railroad, E. F. Brooks, general superintendent, Wilmington, Del., will erect fanhouse in connection with its tunnel on Pennsylvania Ave., between Sewell and Pitcher Sts.; structure will be of brick and stone; reinforced concrete foundation; slag roof; be equipped with suction fans; construction work, exclusive of equipment, will cost about \$12,000.

Md., Chabonne.—Jetties.—Sanford & Brooks Company, 24 Commerce St., Baltimore, Md., submitted bid at \$2987.25 for extension of jetties.

Miss., Iuka.—Lake.—Tishomingo Country Estate awarded contract to J. H. Angel & Co., Florence, Ala., to construct dam for lake covering 20 acres; lake to be 10 to 38 feet deep; dam to be 600 feet long, with base of 135 feet, and roadway on top of 20 feet.

Tex., Austin.—Dam.—A. P. Woodridge, Mayor, advises that several propositions are pending for rebuilding dam; no contracts awarded as yet. (Previously mentioned.)

Tex., Beaumont.—Canal.—Neches Canal Co. increased capital stock from \$400,000 to \$500,000.

Tex., Galveston.—Wharf Shed.—Galveston Wharf Co., J. J. Davis, general manager, awarded contract to James Stewart & Co., 39 Church St., New York, to erect wharf shed at Pier 39; structure will be reinforced concrete with waterproof roofing, vitrified-brick paving, etc.; length 1200 feet; width 200 feet on north side and 400 feet on south; divided with fireproof walls into five compartments; cost of pier when completed is reported at \$100,000.

MISCELLANEOUS ENTERPRISES

Ala., Bessemer.—Publishing.—Standard Publishing Co. increased capital stock to \$10,000.

Ga., Augusta.—Plumbing.—E. J. Erbeling Company incorporated with \$10,000 capital stock by E. J. Erbeling, Mary Erbeling and W. A. Babbett to conduct contracting, plumbing and steamfitting; succeeds E. J. Erbeling.

Ga., Dalton.—Printing.—A. J. Showalter Company will rebuild burned music-printing plant.

Ga., Macon.—Construction.—Union Construction Co. incorporated with \$2000 capital stock by B. F. Smith, W. H. Turner, T. L. Mitchell, W. T. Lowe and others.

Ga., Newnan.—Construction.—Georgia Construction Co. incorporated with \$10,000 capital stock by E. A. Gleason, W. S. Askew, Frank Wilkinson and others.

Ga., Toccoa.—Construction.—Northeast Georgia Construction Co. incorporated with \$10,000 capital stock by J. B. Simmons, C. H. Dance and others.

Ky., Morehead.—Farming Machinery.—Claudill Hardware Co. incorporated with \$25,000 capital stock.

Md., Baltimore.—John Muller Building Co. organized by John Muller, 1649 N. Milton Ave.; Charles Schmidt and B. B. Shreeves.

Md., Baltimore.—Junk.—Boston Iron & Metal Co., 305 N. Holliday St., purchased about an acre of land at Highlandtown as site for erection of wooden-frame building, 80x150 feet; will install large cutting shears, motors, derricks and hoisting engines; building and machinery to cost about \$6500; architect engaged and machinery contracted for.

Miss., Gulfport.—Construction.—Creosoted Wood Block Paying Co., R. S. Manley, presi-

dent, contemplates increasing capital stock in order to handle larger contracts.

Miss., Meridian.—Plumbing.—Briggs-Spinks Plumbing Co. incorporated with \$10,000 capital stock by R. W. Briggs, E. A. Spinks and others.

Mo., Grain Valley.—Lumber and Grain.—Grain Valley Lumber & Grain Co. incorporated with \$5000 capital stock by S. M. Turner of Grain Valley, Samuel L. Luttrell and W. E. Luttrell, Blue Springs, Mo., and others.

Mo., Kansas City.—Publishing.—Middle States Publishing Co. incorporated with \$100,000 capital stock by George Fredericks, Whittier Bauer, F. R. Hopper and others.

Mo., St. Louis.—Publishing.—Words & Works Publishing Co., 2201 Locust St., purchased Trinity Church building for \$7000; will remodel and equip as printing plant.

Mo., St. Louis.—Motor-wagon Delivery.—Motor Wagon Delivery Co. incorporated with \$5000 capital stock by John M. James, Harry C. White, T. B. Gleason and others.

Mo., St. Louis.—Safety Appliances.—Beck Automatic Electric Safety & Signal Switch Co. incorporated with \$50,000 capital stock by Charles Beck, Arthur Beck and Morris Tucker.

Mo., St. Louis.—Laundry.—Spotless Laundry Co. incorporated with \$25,000 capital stock by Alfred N. Baur, William R. Orthwein and Leon Matthey.

N. C., Charlotte.—Garage.—Wallace Automobile Co., W. W. Wallace, Jr., president, awarded contract to J. H. Northy Construction Co. to erect garage; 51x53 feet; cost \$12,000.

N. C., Hendersonville.—Builders' Supplies.—Rigby-Morrow Company incorporated with \$50,000 capital stock by J. C. Morrow, J. A. Fletcher and L. T. Remid; will continue present company and erect additional warehouse.

N. C., Spencer.—Laundry.—J. N. Barringer has, it is reported, purchased Spencer Steam Laundry and will enlarge plant.

N. C., Waynesville.—Plumbing, etc.—Waynesville Supply Co. incorporated with \$5000 capital stock by J. N. Shoolbred, C. G. Logan and H. Rotha.

Okla., Alexander.—Elevator.—Moore Grain Co., F. E. Moore, president, will rebuild elevator reported burned; cost \$5000; mill construction; 25,000 bushels capacity.

Okla., Guthrie.—Mineral Water.—Guthrie Mineral Water Co. incorporated with \$3000 capital stock by F. P. and E. L. Beamer and E. S. Lowther.

Okla., Muskogee.—Engineering.—Federal Engineering & Materials Co. has organized with C. E. Crenger, president; W. G. Humphrey, vice-president; Thomas F. Murdock, secretary-treasurer. (Recently reported incorporated with \$25,000 capital stock.)

S. C., Camden.—Laundry.—Sanitary Steam Laundry organized with S. F. Brasington, president and treasurer; W. R. Eve, Jr., vice-president; T. K. Hudgens, secretary and general manager. Chamber of Commerce recently reported interested in organization of laundry company.)

S. C., Columbia.—Contracting.—Seastrunk Contracting Co. incorporated with \$10,000 capital stock by J. W. Seastrunk, J. S. Moore and L. Bremer.

Tenn., Chattanooga.—Automobiles.—S. L. Mitchell Automobile Co. incorporated with \$10,000 capital stock by S. L. Mitchell, George W. Heggie, Frank Mitchell, S. B. Strang and John S. Fletcher.

Tenn., Memphis.—Elevator.—Cherokee Commission Co., Bristol, Col., will erect elevator and warehouse; R. S. Green will be local manager.

Tex., Columbus.—Publishing.—Colorado Citizen Publishing Co. has organized with B. J. Fehrenkamp, president; S. K. Seymour, vice-president; H. C. Mitchell, secretary; O. A. Zumwalt, treasurer; J. J. Mansfield, manager; will publish newspaper; has printing plant. (Recently reported incorporated with \$5000 capital stock.)

Tex., Whitney.—Hardware.—Bruton Hardware Co. incorporated with \$25,000 capital stock by K. E. Bruton, W. L. Sanderson, A. J. Hicks and others.

Va., Alexandria.—Publishing.—Alexandria Gazette Corporation incorporated with \$25,000 capital stock; R. S. Barrett, president; T. C. Smith, vice-president; H. W. Smith, secretary-treasurer.

Va., Richmond.—Newspaper Plant.—Times-Dispatch Company will erect building for offices and printing plant; fireproof; steel and concrete construction; plans and specifications have been prepared; cost, name and address of architect and other details not yet announced.

Va., Richmond—Printery.—J. W. Ferguson & Sons awarded contract to J. Thomas Nuckels, Richmond, to erect printing house; four stories; 63x95 feet; slow burning construction; heating plant to cost \$700; elevator, cost \$600; cost of plant, \$30,000; plans by W. B. Newell, Richmond.

Va., Richmond—Publishing.—Central Publishing Co. Incorporated with \$25,000 capital stock; J. Sterling Taylor, president; John E. Rayford, vice-president; Peter J. Kernodle, secretary-treasurer.

Va., Roanoke—Construction.—W. H. Reynolds Construction Co. Incorporated with \$15,000 capital stock; W. H. Reynolds, president; M. C. Reynolds, vice-president; O. M. Phipps, secretary-treasurer, all of Cedar Bluff, Va.

MISCELLANEOUS FACTORIES

Ala., Holt—Chemicals.—Semet-Solvay Company will double plant; has not arranged for the increase; main office at Syracuse, N. Y.

Ala., North Birmingham—Coke By-products. F. J. Lewis Manufacturing Co. of Chicago, Ill., will build plant costing about \$25,000 to manufacture from coke by-products of ovens of Woodward Iron Co.

Ark., Helena—Motor Device.—Motor Device Co. Incorporated with \$5000 capital stock to manufacture auto self-starting device and auto carburetor.

D. C., Georgetown—Gas.—Georgetown Gaslight Co. will build plant costing about \$500,000; controlling interests of this company and Washington Gaslight Co., Washington, D. C., plan merging these companies.

Fla., Tampa—Crosby & Hathcock Co. Incorporated with \$25,000 capital stock to manufacture rosin, spirits of turpentine, etc.; G. A. Petteway of Tampa is president; W. C. Hathcock vice-president, Plant City, Fla., and J. W. Crosby general manager, secretary and treasurer, Tampa.

Fla., Tampa—Clothing.—Warren E. Smith, New Orleans, La., is considering establishment of plant to manufacture Spanish linen clothing.

Ga., Augusta—Tobacco.—Seminole Tobacco Co. Incorporated with \$12,500 capital stock by J. C. Lamar, James T. Gardiner and J. M. Landrum.

Ga., Macon—Rail joints.—U. R. Hatfield, Roland Ellis and associates plan organization of \$250,000 corporation to manufacture joints for clamping steel rails.

Ga., Rome—Trousers.—J. H. Taylor, president Rome Manufacturing Co., states that recently-noted sewing machines have been installed.

Ky., Bowling Green—Boat Wheels.—J. B. Burch Hexagon Boat Wheel Co. Incorporated with \$5000 capital stock by J. B. Burch, L. C. Gooch and G. D. Milliken; will manufacture patented hexagon boat wheels.

Ky., Frankfort—Brooms.—C. P. Chenauff is interested in plan to establish plant for manufacturing brooms and other articles from broom corn. (See "Machinery Wanted.")

La., Franklin—Sugar.—Vilroy Sugar Co. organized with \$100,000 capital stock; John D. Bell, president; S. H. Kelly, vice-president; F. E. Robertson, secretary-treasurer.

La., Lake Charles—Gas.—J. S. Connolly, Carthage, Mo., will petition City Council for franchise for gas plant.

Md., Baltimore—Automobiles, etc.—Twombly Motor Co., 220 E. 41st St., New York, has decided not to locate plant in Baltimore. (Recently reported.)

Md., Baltimore—Electro-Clock Co., Sidney C. Vincent, manager, Calvert and Franklin Sts., leased four-story warehouse at 113-115 Mercer St. and will remodel and equip as electric clock factory.

Miss., Brookhaven—Creamery.—Brookhaven Co-operative Creamery Incorporated with \$5000 capital stock by J. M. Meyer, G. W. Peets, A. S. Bullock, E. C. Smith and others.

Miss., Jackson—Capital Manufacturing Co. Incorporated with \$30,000 capital stock by J. M. Hartfield and A. H. Longino.

Mo., Columbia—Milk Products.—International Milk Products Co. Incorporated with \$20,000 capital stock by B. R. Clerk, H. E. McKinney and E. T. Alexander.

Mo., Joplin—Powder Works.—E. I. Dupont de Nemours Powder Co., Wilmington, Del., is proceeding with construction of proposed powder works; buildings in course of construction are to be equipped with water-works machinery; water is to be secured from Scotland Spring.

Mo., Kansas City—Roofing.—American Roofing Co. Incorporated with \$150,000 capital stock by Robert Glendinning, John Logan and David S. Barbour.

Mo., Skidmore—Novelties.—Novelty Manu-

facturing & Investment Co. Incorporated with \$3000 capital stock by Richard A. Walker, William J. Skidmore and Stacy E. Walker.

Mo., St. Louis—Vending Machines.—Ideal Vending Machine Manufacturing Co. Incorporated with \$10,000 capital stock by John Ford, Joseph L. Scheuble and Joseph G. Beckman.

Mo., St. Louis—Railway Valve Gear.—National Railway Valve Gear & Equipment Co. Incorporated with \$200,000 capital stock by Leland A. Wind and David L. Price of St. Louis and Irvin F. Watkins, Kansas City, Mo.

Mo., St. Louis—Brushes.—Hydro-Brush manufacturing Co. Incorporated with \$50,000 capital stock by C. Arthur Lewis, Henry W. Lewis and Edward A. Billups.

Mo., St. Louis—Car Stoppers.—Saunders Car Stopper & Equipment Co. will not erect plant at present; will have stoppers manufactured by Green's Car Wheel Manufacturing Co. of St. Louis; Saunders company was recently noted Incorporated with \$250,000 capital stock by D. R. Saunders, Columbus, Miss., and others to manufacture corrugated steam railway car stopper to replace present bumping posts. (Mr. Saunders' address incorrect in recent item.)

Mo., Kansas City—Gas Products.—Bituminous Gas Product Co. Incorporated with \$50,000 capital stock by W. Clifton Hogan, L. E. Jones, W. A. Shoemaker and others.

N. C., Charlotte—Roller Covering.—W. F. Mahoney will establish roller-covering plant.

N. C., Elizabeth City—Candy.—Charles H. Robinson will erect building; brick; 60x90 feet; shed extending over river 14x60 feet; three stories; brick; will install freight elevator; will be occupied by W. H. Weatherly Company.

Okla., Cleveland—Glass.—Chanute Window Glass Co., Chanute, Kans., contemplates building plant; has made no decision.

Okla., Lawton—Brooms.—Crites Broom Co., E. J. Crites, president, will rebuild plant recently reported burned; plans not decided; probably 50x60-foot concrete building; wants estimates; will decide on machinery at annual meeting May 10; daily capacity 60 to 75 dozen brooms. (See "Machinery Wanted.")

Okla., Oklahoma City—Perfumes, etc.—De France Chemical Co., recently reported Incorporated with \$100,000 capital stock, has acquired properties of firm of similar name at Shawnee, Okla., and will establish plant in Oklahoma City to manufacture toilet articles, perfumes, etc., and grocers' sundries; preliminary structure will be about 50x120 feet and two stories high; other buildings will be erected later; W. T. S. Barnes, president, Shawnee, Okla.; L. C. Whitman, vice-president, St. Louis, Mo.; Clyde C. Handell, secretary, Oklahoma City; Charles E. Veigard, treasurer, Oklahoma City; offices will be in Colcord Bldg., Oklahoma City.

Okla., Oklahoma City—Builders' Supplies.—Builders' Material Co. Incorporated with \$10,000 capital stock by J. S. Kendall, W. B. Johnson and F. S. Owen to handle lumber and building material.

S. C., Dillon—Aeroplanes.—Dillon Aviation Co. organized with \$25,000 capital stock to establish plant for manufacturing aeroplane supplies; J. D. Manning of Dillon is president; Fred E. Rowe, vice-president, Bennettsville, S. C., and J. F. Thompson of Dillon, secretary-treasurer.

Tenn., Chattanooga—Imitation Marble.—George Hancock and R. H. Remick, Dayton, O., contemplate organizing company to manufacture scagliola, imitation marble.

Tenn., Chattanooga—Toilet Preparations.—Yaze Company Incorporated with \$10,000 capital stock by J. L. Newkirk, Jr., William O. Oldis and R. W. Hassell.

Tenn., Knoxville.—Greenwood Advertising Co. awarded contract to S. M. Beaumont & Co. of Knoxville to erect manufacturing plant; building will be brick; three stories; estimated cost, \$20,000; plans by R. F. Graf & Son of Knoxville; equipment supplied.

Tex., Colmesneil.—Tyler Turpentine Co. Incorporated with \$10,000 capital stock by S. S. Day, W. H. Day of Colmesneil and G. F. Mason of New Orleans, La.

Tex., Marshall.—Marshall Manufacturing Co. Increased capital stock from \$15,000 to \$25,000.

Tex., Wichita Falls—Electrical Appliances. Chamber of Commerce has arranged with Milwaukee (Wis.) capitalists for establishment of plant to manufacture small dynamos and electrical appliances; company will be organized with \$75,000 capital stock.

Va., Norfolk—Wine.—Garrett & Co. Incorporated with \$900,000 capital stock; Paul Garrett of Norfolk, president; S. H. Wright, vice-president, St. Louis, Mo.; C. B. Cole, secretary, and H. R. Weller, treasurer, both of Norfolk.

Va., Norfolk—Medicine.—Guy-a-col Medicine Co. Incorporated with \$50,000 capital stock; W. J. Joyner, president; H. E. Glover, vice-president; J. L. Horsely, secretary, all of Portsmouth, Va.

Va., Richmond—Automobiles.—Kline Motor Car Corporation chartered with \$500,000 capital stock; will establish \$150,000 plant for manufacture of automobiles and trucks; president, S. E. Bailey of Philadelphia, Pa.; vice-president and treasurer, Samuel W. Meek of Richmond; secretary, D. R. Midyette of Richmond; engineer and general manager, James A. Kline of York, Pa.; company will erect 1600x90-foot building; cost \$100,000; date of opening building proposals not fixed.

Va., Richmond—Dixie Cover Co. Incorporated with \$5000 capital stock; E. P. Conquest, president; U. Clement, secretary.

Va., Richmond—Automatic Weighing Wagons.—National Automatic Machine Co. Incorporated with \$5000 capital stock; Robert Brooke, president; John Brandt, secretary, and C. R. Button, treasurer, all of New York.

Va., Richmond—Printery, etc.—A. Hoen & Co., 1109 Bank St., will rebuild printing, lithographing and engraving plant reported burned at loss of about \$150,000.

W. Va., Buckhannon—Confections, etc.—Ward-Young Manufacturing Co. Incorporated with \$15,000 capital stock by James F. Ward, J. B. Young, Virgil F. Bird and others.

W. Va., Clarksburg—Glass.—Mountain Window Glass Co., Condersport, Pa., will build 48-blower tank plant for manufacturing window glass.

W. Va., Glenova, P. O. Box 213, Wheeling—Window Weights, etc.—Dentler Manufacturing Co. will erect plant to manufacture iron castings, window weights and counterbalances; building will be 65x75 feet, of brick; Geo. W. Koehrling, contractor; machinery purchased; W. L. Dentler, president and manager; Chas. E. Lynn, secretary-treasurer. (Previously noted Incorporated with \$10,000 capital stock.)

W. Va., Huntington—Pulp.—Central City Bunt Co. is reported interested in establishment of pulp factory.

W. Va., Huntington—Farming Implements, etc.—J. Harold Ferguson Company Incorporated with \$25,000 capital stock by J. Harold Ferguson, H. C. Solter, Lewis A. Staker and others.

W. Va., Morgantown—Glass.—A. E. Lewis Glass Co. Increased capital stock from \$10,000 to \$25,000.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Savannah—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, Wilmington, N. C., it is reported, awarded contract to Williams & Co. of Savannah to erect turntables, additional offices and general enlargement of roundhouse at Southover Junction; reported expenditure \$200,000. (Recently mentioned.)

ROAD AND STREET WORK

Ala., Aliceville.—City awarded contract to J. M. Swalm, Chapel Hill, Tenn., to construct concrete sidewalks; walks to be 5½ feet wide, including curb.

Ala., Birmingham.—Board of Commissioners adopted improvement ordinances aggregating \$320,000; work will include street improvements and storm sewer construction; Maury Nicholson, City Engineer. (See "Sewer Construction.")

Ala., Cullman.—City will let contract May 1 for construction of seven miles of concrete sidewalks recently noted; M. L. Robertson, Mayor. (See "Machinery Wanted.")

Ala., Demopolis.—Demopolis Business League, A. R. Smith, president, is promoting construction of model road from Reese's lane one mile toward Linden, Ala., estimated to cost \$2000; League has accepted proposition of United States Department of Agriculture to furnish expert to supervise construction work; Marengo County Commissioners have agreed to maintain road after completion.

Ala., New Decatur.—City awarded contract to Halliburton & Brooks, Birmingham, Ala., at \$319.33 to construct cement sidewalks in East New Decatur; Henry Hartung, City Clerk. (City Council recently stated to have authorized sale of \$700 of bonds for street improvements.)

Ala., Selma.—City contemplates paving Broad St. from Dallas to Union passenger station; J. L. Clay, Mayor.

D. C., Washington.—Bids will be received until May 6 for laying asphalt block pavements; Cuno H. Rudolph and others, Com-

missioners, District of Columbia. (See "Machinery Wanted.")

Fla., Deland.—Volusia county will construct one-half mile of shell or clay road on east end of New York Ave. from city limits; bids received until May 1; Samuel D. Jordan, Clerk Circuit Court. (See "Machinery Wanted.")

Fla., Jasper.—City, H. S. Caldwell, Mayor, voted \$17,500 bond issue for street and sidewalk improvements. (Recently noted.)

Fla., Jasper.—Hamilton County Commissioners awarded contract to Jasper Land & Improvement Co., Jasper, at \$300 per mile, for construction of recently noted 30 miles of road; J. B. Wetherington, Clerk Circuit Court.

Ga., Perry.—Houston County Commissioners of Roads and Revenues are considering issuance of \$100,000 of bonds for improving roads and bridges.

Fla., St. Augustine.—City will curb Bay St. from foot to King St. with granite or concrete; bids opened April 26; John M. G. Carrera, City Clerk.

Ga., Dublin.—City awarded contract to Alabama Paving Co., Birmingham, Ala., at \$13,334 to pave with vitrified brick Madison St. from Lawrence to Franklin, Lawrence St. from Madison to Jackson and Franklin St. from Madison to Jackson; work includes 2300 feet of granite curbing.

Ga., Nashville.—Berrien County Commissioners awarded contract for construction of 10.7-10 miles of road; drains are to be bridged; right of way to be 30 feet wide.

Ky., Lexington.—City will pave Kentucky, Oldham, Clay, Ashland, Bryan, Columbia, Lexington and Woodland Aves. with macadam and macadam with asphalt binder; concrete curbing and guttering; bids received until April 26; John Skain, Mayor.

Ky., Paducah.—McCracken county will construct 40 miles of gravel roads; cost \$40,000. Address County Commissioners.

La., Bunkie.—Bunkie and Bayou Dulac Canal Committee awarded contract to S. J. Burlin, Cottonport, La., at \$22,700 to construct proposed road and canal from Bunkie to Bayou Dulac.

Md., Baltimore.—State Roads Commission, Union Trust Bldg., will receive bids until May 10 for construction of 57.10 miles of roadway in Anne Arundel, Baltimore, Calvert, Carroll, Charles, Dorchester, Frederick, Garrett, Montgomery, Prince George and Queen Anne counties; John M. Tucker, chairman of commission. (See "Machinery Wanted.")

Md., Rockville.—Montgomery County Commissioners are preparing to improve road from Rockville to Norbeck, distance of four and a half miles; work will be under supervision of M. Donaldson Knight, county road superintendent.

Md., Frederick.—Board of Aldermen invite bids for paving E. Patrick St. from Carroll to East St., W. Patrick from Court to Bentz St., S. Market from All Saints' to South St., W. Church from Market to Court St. and W. 3d from Market to Bentz St.; vitrified brick with granite curbing is specified. Address The Mayor.

Miss., Collins.—Beat 3, Covington county, Mississippi, contemplates letting contract May 1 on first instalment (about 18 miles) of highway construction; contract to be awarded for construction of 20 or 25 miles additional when surveys are completed; R. E. Snowden, highway engineer, Snowden, N. C.; J. M. Russ, chairman Road Commissioners.

Miss., Grenada.—City will construct 75,000 to 150,000 feet granolithic sidewalks; bids received until May 1; L. B. James, City Recorder. (See "Machinery Wanted.")

Miss., Grenada.—Albert T. Whitbeck, Brookhaven, Miss., has been appointed engineer of Grenada county; will relocate and straighten county roads and reduce grades in hilly section preparatory to further construction of roads; engineer will also have office in Grenada.

Miss., Iuka.—First Supervisors' District, Tishomingo county, voted March 31 on bond issue for road construction. Tishomingo County News of Iuka may be addressed for further information.

Miss., Tupelo.—City voted issuance of \$50,000 of bonds for street paving, improvement of electric-light plant and erection of city hall; C. E. Goodlet, Clerk. (Recently mentioned.)

Mo., DeSoto.—DeSoto Special Road District voted issuance of \$30,000 of bonds to improve three roads leading out of DeSoto; \$18,000 is to be expended on DeSoto and Bonne Terre Rd.; W. A. Welch, clerk of district, states that \$35,000 is available and 12 to 13 miles of macadam road is contemplated.

plated; date for opening bids not set, but probably from May 15 to 20.

Mo., Lexington.—Lexington Special Road District will grade and macadamize 25 miles of road; amount available, \$125,000; James K. Gray, engineer in charge, Lexington; date of opening bids is under consideration. (Recently noted.)

Mo., St. Louis.—City will reconstruct 21st St. from Washington to Cass Ave., and 25th St. from Cass to St. Louis Ave.; bids received until May 5. Address Board of Public Improvements. (See "Machinery Wanted.")

Mo., Sedalia.—Road Committee recommends construction of 14 1/2 miles of road, including Lake Creek via water-works, to Bahner, 11 1/4 miles; Warsaw and Ionia Rd., 8 miles; Green Ridge, Camp Branch and Kansas City Junction, 13 1/2 miles; 16th St. and Elk Fork Rd., 11 miles; Bresden, Lamonte and John County Line, 12 1/2 miles; Georgetown, Hughesville, Houstonia and Blackwater, 17 1/2 miles, etc.; Pettis county will vote May 16 on issuance of \$350,000 of bonds. (Recently mentioned.)

N. C., Asheville.—Buncombe county will grade road from point in State road near Dickens school, to Swannanoa River near Farm school, and to connect with B. Fortnae Rd.; bids received until April 29; J. C. M. Valentine, road engineer; W. E. Patton, County Commissioner.

N. C., Fayetteville.—Board of Aldermen authorized issuance of \$4000 of bonds for street paving. Address The Mayor.

N. C., Fort Caswell.—Constructing Quartermaster R. O. Edwards will receive proposals until May 12 for constructing about 500 square yards macadam, concrete or gravel road and about 2000 square feet concrete sidewalk. (See "Machinery Wanted.")

N. C., Rich Square.—Rich Square township, Andrew J. Conner, chairman Road Commissioners (recently noted to issue \$30,000 for road improvements), will probably build sand clay roads; practically no grading. (See "Machinery Wanted.")

N. C., Williamston.—Williamston township will construct system of sand-clay roads, for which \$40,000 is available. Address Township Commissioners.

Okla., Pawhuska.—City Council has awarded contracts for street paving. Address The Mayor.

Okla., Oklahoma City.—City will grade 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st and other streets; bids received until May 1; Bob Parman, City Clerk. (See "Machinery Wanted.")

S. C., Greenville.—City is considering issuance of \$125,000 of bonds additional for street paving. Address The Mayor.

S. C., Sumter.—City will expend \$25,000 for improvements on its main street; date for opening bids on construction or materials not set; W. Loring Lee, engineer. (Bonds recently reported voted.)

Tenn., Chattanooga.—Hamilton County Good Roads Commission, Edward Baas, chairman, decided to pave Main St. with 11-foot center of brick, flanked on each side by 11-foot strip of bitulithic or some similar substance; Main St. in St. Elmo with brick to point near cemetery gate, and from there Georgia Ave., St. Elmo, will be paved with bitulithic or some similar material to end of street-car line; E. E. Betts, engineer in charge; Joe V. Williams, County Judge. (Recently mentioned.)

Tenn., Maryville.—Blount County Commissioners awarded contract to R. B. Oliver to construct road connecting Maryville and Rockford; T. F. Cooper, Pike Commissioner. (County Court recently reported as having voted \$300,000 bond issue for road improvement.)

Tenn., McMinnville.—Warren county will vote May 6 on issuance of \$100,000 additional bonds to extend five of recently completed roads to county line. Address County Commissioners.

Tenn., Memphis.—City will pave West Court Ave. with wood block or asphalt pavement and relay old brick pavement on South Lyceum Lane from Union to Monroe Ave.; approximate amounts: West Court Ave., 815 square yards old brick pavement removed, 815 square yards concrete foundation bushed and 815 square yards wood block or asphalt pavement; South Lyceum Lane, 320 cubic yards excavation, 631 square yards concrete foundation and 631 square yards old brick relaid; old brick used on Lyceum Lane will be furnished by city; bids opened; E. H. Crump, Mayor; Ennis M. Douglass, City Clerk.

Tenn., Nashville.—City will construct granite curbs and sidewalks on Division St., Fifteenth Ave. N., McMinn Ave., Kensington Pl. and Leslie Ave.; bids received until April 25; William W. Southgate, City Engineer.

Tenn., St. Elmo.—Toilet Preparations, etc.—Yozo Company incorporated with \$10,000 capital stock by Gordon Wood, J. H. Persinger, J. L. Newkirk and others to manufacture toilet articles; occupy rented building.

Tex., Bellville.—First Justice Precinct No. 1 of Austin county voted issuance of \$50,000 of bonds for road improvements. Address County Commissioners. (Recently mentioned.)

Tex., Dallas.—City will pave Cole Ave. from Lemmon Ave. to Knox St. with asphalt macadam; bids received until May 3; J. B. Winslett, City Secretary. (See "Machinery Wanted.")

Tex., Dallas.—Municipal Commissioners awarded contract to Cresote Wood Block Paving Co. at \$2.35 per square yard to pave McKinney Ave. from Harwood St. to Cochran, and Cochran from McKinney to Lamar; for McKinney Ave. section cost will be \$19,722.99, of which city's share will be \$4597.43; Cochran St. paving will cost \$13,527.10, of which city's share will be \$2597.38. Commissioners also awarded contract for paving Pennsylvania Ave. from Holmes to Colonial with bitulithic; William Doran, Street Commissioner.

Tex., Dayton.—Dayton precinct of Liberty county will vote May 23 on issuance of \$275,000 of bonds for construction of shell road. Address Precinct Commissioners.

Tex., Fort Worth.—City awarded contract to Texas Bitulithic Co., Dallas, Tex., to pave Elizabeth Blvd., Rowe St. and Page Ave. at \$2.05% per square yard.

Tex., Galveston.—Galveston county will bulkhead, surface and pave Galveston county highway from city limits and Broadway to Causeway; bids opened April 24; John M. Murch, County Auditor.

Tex., Houston.—Harris County Commissioners awarded contract to Texas Grading Co. of Houston to pave San Jacinto battleground road, Cedar Bayou and Crosby Rds.; Howe & Wise, County Engineers; John B. Ashe, County Auditor. (Recently mentioned.)

Tex., Houston.—Harris county reported to contemplate construction of 23 miles crushed-rock road; Howe & Wise, County Engineers. Estimate cost at \$100,000; A. E. Amerman, County Judge.

Tex., Houston.—Bids are invited for clearing, grubbing and grading three miles of streets in Houston Harbor Addition; Tolman Engineering Co., 403 First National Bank, Houston, is in charge. (See "Machinery Wanted.")

Tex., Liberty.—Liberty precinct of Liberty county will vote May 16 on issuance of \$250,000 of bonds for construction of about 90 miles of roadway. Address County Commissioners. (Recently mentioned.)

Tex., Longview.—City voted bond issue of \$30,000 for paving business streets, electric lighting, etc.; G. A. Bodenheim, Mayor. (Recently noted.)

Tex., Paris.—Precinct No. 1 of Lamar county voted \$300,000 bond issue for road construction; T. J. Record, president of Lamar County Good Roads Association. (Recently mentioned.)

Tex., San Angelo.—City is preparing to pave 16 to 20 blocks at total cost of about \$100,000; \$20,000 of bonds have been issued, which will be supplemented by abutting property owners and street-railway company. Address The Mayor.

Tex., Wallis Station.—Wallis Precinct of Austin county voted \$25,000 bond issue for road construction. Address County Commissioners, Bellville, Tex.

Va., Portsmouth.—E. Parke Lindsay of Portsmouth is lowest bidder at 74 1/2 cents per square yard for construction of macadam roadway on Cottage Toll Bridge Rd. through Lafayette Residence Park; 5400 square yards six-inch macadam; also 1000 cubic feet excavation at 27 1/2 cents and 530 square yards eight-inch macadam at 59 1/2 cents; contract to be awarded May 1; Alvah H. Martin, chairman Permanent Road Improvement Commission. (Call for bids recently noted.)

Va., Richmond.—Street Committee of City Council awarded contracts for curbing and guttering various streets in Washington ward, including 8th, Stockton, Decatur, 5th, 7th and other streets; estimated cost \$40,000; estimates have also been received for \$18,000 worth of curbing and guttering on 9th, 10th, 11th, 12th, 13th and 15th Sts.; City Council has appropriated \$50,000 for street improvements in Washington ward; Charles E. Bol-

ling, City Engineer. (Recently mentioned.)

Va., Roanoke.—Street Committee awarded contract to J. T. Muddiman & Co. to construct five-foot sidewalks on Loudoun, Harrison, Fairfax and Shenandoah Aves., etc.; also to C. Markley & Co. to macadamize, gutter and curb Henry St. N. W. from Henry St. bridge to Harrison Ave.

Va., Tazewell.—Tazewell county voted issuance of \$625,000 of bonds for road improvements. Address County Commissioners. (Recently mentioned.)

Va., Wise.—Wise County Board of Supervisors will open bids on or about May 25 for construction of about 125 miles of macadam roads; \$700,000 bond issue has been voted as previously stated.

W. Va., Clarksburg.—Harrison County Commissioners awarded contract to W. T. Gates & Co., Flemington, W. Va., at \$823 to pave W. Milford pike.

W. Va., Wheeling.—Ohio Valley Automobile Club will open bids May 1 for paving of Wheeling Hill from Mt. Wood Rd. to corporate limits at Fulton; road is to be paved with hillside brick; width of paving, 15 feet; length, 2100 feet; plans and specifications are on file in office of A. A. Wheat, 1022 Schumacher Bldg., where they may be seen by prospective bidders; bids are to be opened in Mr. Wheat's office.

SEWER CONSTRUCTION

Ala., Birmingham.—Board of Commissioners adopted improvement ordinances aggregating \$320,000; work comprises storm-sewer construction, including Southside sewer, estimated to cost \$235,000, and street improvements; Maury Nicholson, City Engineer.

Ala., Florence.—City is considering construction of storm sewers at estimated cost of \$12,000 to \$13,000. Address The Mayor.

Ala., Jasper.—City voted \$10,000 bond issue for sewer construction; plans not decided and engineer not selected; improvement in charge of City Council, C. W. Smith, president, and of Bond Trustees, W. H. Greene and others. (Recently noted.)

Ala., New Decatur.—City awarded contract to Adamant Stone & Roofing Co., Nashville, Tenn., at \$797.50 for construction of storm sewers in South New Decatur, and to W. M. Leftwich Company, Nashville, Tenn., at \$237.92 for construction of storm and lateral sewers in West New Decatur. (Call for bids recently noted.)

Ala., Oxford.—City will vote May 22 on issuance of \$12,000 of bonds for construction of sewer system. Address The Mayor.

N. C., Black Mountain.—City voted issuance of \$15,000 of bonds for construction of sewer system and water-works; George W. Stepp, Mayor. (Recently mentioned.)

D. C., Washington.—Bids will be received until May 8 for construction of sewers; Cuno H. Rudolph and others, Commissioners, District of Columbia. (See "Machinery Wanted.")

Ga., Ashburn.—City will vote on issuance of \$20,000 of bonds for construction of sewer system and water-works. Address The Mayor.

Ga., Barnesville.—City voted issuance of \$15,000 for extension of sewer system, etc. Address The Mayor. (See "Water-works.")

Ga., Sparta.—City awarded contract to Walton & Wagner, Atlanta, Ga., to construct sewer system recently mentioned. (See "Water-works.")

Ky., Lexington.—City will extend southern main sewer on Euclid Ave. from Woodland to Ashland Ave.; bids opened April 24; John Skain, Mayor, Hernando Bldg.

Md., Frederick.—Board of Aldermen invite bids on construction of terra-cotta sewer on W. 3d, W. Patrick and S. Market Sts. Address The Mayor.

Miss., Amory.—City voted bond issue of \$65,000 for installing sewerage and water-works; E. C. Dalrymple, City Clerk.

Tenn., Newport.—Town will vote April 29 on construction of sewer system. Address Town Clerk.

Tenn., Park (R. Station, Knoxville).—City will construct sanitary sewers; bids received until May 1; A. J. Queener, Recorder. (See "Machinery Wanted.")

Tex., Fort Worth.—City will construct sewers in Highland Park and Southland Additions; will include 8-inch sewer line through Glenwood; cost \$15,930; J. D. Tram-mell, City Engineer.

Tenn., Tullahoma.—City will vote on issuance of \$25,000 of bonds for construction of sewer system. Address The Mayor.

Va., Richmond.—Streets committee recommended appropriation of \$200,000 for con-

struction of sewer system in Washington ward; Charles E. Bolling, City Engineer.

Va., Richmond.—City awarded contract to L. E. Brown & Co. of Richmond to construct sewer in Floyd Ave. from alley east of Deep Run St. to west corporation line; cost \$7000. (Recently mentioned.)

TELEPHONE SYSTEMS

Ark., Fort Smith.—Southern Telephone Co., Fordyce, Ark., advises Manufacturers Record that company will not build at Fort Smith. (Recent report incorrect.)

Mo., Crane.—Crane Telephone Co., incorporated with \$5000 capital stock by H. B. Boyd, G. W. Woodford, E. W. Cristle and others.

Okla., Savanna.—Savanna-Coastline Telephone & Telegraph Co., L. J. George, president, will construct rural route; charter allows 150 miles, with exchange at Savanna; plans not decided. (Recently noted incorporated with \$5000 capital stock.)

S. C., Edgefield.—Long Cane Telephone Co., incorporated with B. E. Sawyer president, J. K. Allen vice-president, J. H. Cogburn secretary.

Tenn., Portland.—Portland Mutual Telephone Co., incorporated by J. K. P. McGlothlin, C. W. Kerley, S. H. Roark and others.

Tex., Corpus Christi.—Southwestern Telephone & Telegraph Co. (main office, Dallas, Tex.) purchased site 50x100 feet on which to erect telephone exchange and office building; two stories; fireproof; reinforced concrete; faced with pressed brick and trimmed with stone; concrete floors; equipment will have capacity for 3000 lines; company will lay wires underground in business section; estimated total expenditure, \$60,000. (Recently mentioned.)

Tex., Wichita Falls.—Southwestern Telephone & Telegraph Co., Dallas, Tex., will erect two-story brick telephone exchange.

Va., Blacksburg.—City will vote May 15 on issuance of \$12,000 of bonds for construction of sewer system and water-works; F. W. Eheart, Mayor. (Recently mentioned.)

Va., Midland.—Fauquier Mutual Telephone Corporation incorporated with \$5000 capital stock; G. H. Armstrong, president; H. S. Russell, secretary; C. W. O'Roark, treasurer.

TEXTILE MILLS

Ala., Siluria.—Cotton Cloth.—Buck Creek Cotton Mills will expend about \$250,000 for additional buildings and machinery; erect additions to main mill, power-house and warehouses, besides constructing 30 to 40 operatives' cottages; add 10,000 spindles, with accompanying roving, carding and picking machinery; install 40-inch automatic looms in place of present 28-inch plain looms; engineer in charge, J. E. Sirrine of Greenville, S. C.; building contractors, T. C. Thompson & Bros. of Birmingham, Ala., and Charlotte, N. C.; all machinery contracts have also been awarded. (Recently reported formed as reorganization of Siluria Cotton Mill Co.)

Ga., Reynolds.—Cotton Goods.—J. H. Neisler, secretary Chamber of Commerce, is reported as interested in plan to build cotton mill.

Ky., Frankfort.—Cotton Goods.—C. P. Chennault is interested in plan to build and equip cotton mill; now investigating machinery and plans and specifications. (See "Machinery Wanted.")

Md., Lonaconing.—Silk.—Klotz Trowing Co. will, it is rumored, enlarge silk mill; main offices at Carbondale, Pa.

S. C., Spartanburg.—Hosiery.—R. T. Jaynes and Wm. A. Hetrick of Wallhalla, S. C., will organize company to establish hosiery knitting mill; have purchased building.

S. C., Ware Shoals.—Cotton Cloth.—Ware Shoals Manufacturing Co. will install two intermediate frames, four jack frames, etc.; expenditure about \$12,000; all contracts awarded.

Tenn., Memphis.—Cotton Goods.—C. C. Hanson, Tennessee Trust Bldg., proposes organization of cotton-mill company.

Tex., Fort Worth.—Cotton Goods.—E. B. Webster, First National Bank Bldg., plans organization of company capitalized at \$300,000 to build cotton mill; represents capitalists interested.

WATER-WORKS

Ala., Attalla.—Etowah Light & Power Co. will, it is reported, improve water and electric-light systems at cost of \$50,000; has secured 20-year franchise.

Ark., Mena.—City has engaged Winters & Dove, civil engineers, Fort Smith, Ark., to prepare plans for rebuilding water-works; cost about \$60,000; John Thompson, Mayor. (Recently mentioned.)

Fla., Fort Lauderdale.—W. H. Marshall, Mayor, states that water-works system will be installed during year; details not settled.

Fla., South Jacksonville.—City voted issuance of \$60,000 of bonds for construction of water-works and electric-light plant; R. O. Moore, chairman Board of Bond Trustees.

Ga., Ashburn.—City will vote on issuance of \$20,000 of bonds for construction of water-works and sewer system. Address The Mayor.

Ga., Atlanta.—Bids addressed to Board of Water Commissioners will be received by secretary of board until noon May 3 for erection of a one-story frame house at No. 2 Hemphill pumping station of Atlanta water-works; plans and specifications can be had at water-works office, City Hall; certified check in sum of \$200 required with bid; W. Z. Smith, general manager of water-works.

Ga., Barnesville.—City voted issuance of \$15,000 of bonds for extension of water, sewer and light systems. Address The Mayor. (Recently mentioned.)

Ga., Oglethorpe.—City will construct water-works; open proposals about July 1; engineer not selected. Address C. A. Allison. (See "Electric-light and Power Plants.")

Ga., Sparta.—City awarded contract to Walton & Wagner, Atlanta, Ga., at about \$34,000 for construction of water-works and sewer system; contract includes three miles of sewers and purification plant and three and a half miles of water mains, four to eight inches in diameter; two 750,000-gallon pumps, air compressor, boiler, power-house, 100,000-gallon brick reservoir, 80,000-gallon tank on steel tower, 150 feet to top of tank. (Recently mentioned.)

Ky., Corbin.—M. W. Steele, secretary local Board of Health, states that City Council employed Mr. Bullock of Kansas City to superintend water-works project, though vote cannot be taken before November election; E. R. White, clerk. (Recently mentioned.)

Miss., Amory.—City voted bond issue of \$65,000 for installing water-works and sewerage; E. C. Dalrymple, City Clerk.

Miss., Bassfield.—City will receive bids until May 5 for construction of water-works system recently noted; plans and specifications with J. P. Dear, clerk, and with Xavier A. Kramer, engineer, Magnolia, Miss. (See "Machinery Wanted.")

Mo., Pleasant Hill.—City Council granted 20-year franchise to C. W. Dobbins for construction of water-works; proposed to construct dam which will impound sufficient water to form reservoir of 102 acres; Kansas City (Mo.) engineers are making surveys.

N. C., Black Mountain.—City voted issuance of \$15,000 of bonds for construction of water-works and sewer system. George W. Stepp, Mayor. (Recently mentioned.)

N. C., Concord.—City has \$50,000 bond issue available for water-works construction. Address The Mayor.

N. C., Oxford.—Oxford Water Co. incorporated with \$15,000 capital stock by A. H. Powell of Oxford, Richard C. M. Calvert of College Park, Md., and Charles F. Nesbit of Washington, D. C.

Okla., Kingfisher.—City voted issuance of \$28,000 of bonds for extension of water-works and enlargement of electric-light plant; V. H. Francis, superintendent of water and light plant.

Okla., Lamont.—City is considering construction of water-works estimated to cost \$20,000; W. F. Porter, City Clerk.

Okla., Sapulpa.—City Commissioners and Mayor Denton approved plans for water-works to cost \$250,000 and issued call for bids on construction work; plans call for series of three dams along Rock and Fuchee creeks, with capacity of 1,000,000 gallons of water, filter beds and settling basins; Burns & McDonnell, Dwight Bldg., Kansas City, Mo., are engineers in charge. (Recently mentioned.)

Okla., Soper.—City voted \$12,000 for water-works construction; will receive bids on pipe, tank, pump, hydrants, etc.; J. E. Davis, engineer, Caddo, Okla.; Harley Hughes, Town Clerk. (See "Machinery Wanted.")

Okla., Tulsa.—City will improve water-works at cost of \$40,000. Address The Mayor.

Tenn., Newport.—Town will vote April 29 on construction of water-works. Address Town Clerk.

Tex., Caldwell.—City will vote May 23 on issuance of \$6000 of bonds for construction of 16x100-foot steel standpipe; recent election was illegal; J. A. Gray, Mayor. (Recently mentioned.)

Tex., Port Lavaca.—W. E. Shell petitioned City Commissioners for franchise for water-works and electric-light system.

Tex., Hearne.—City voted issuance of

bonds for construction of water-works. Address The Mayor. (Recently mentioned.)

Tex., Mission.—Mission Land & Improvement Co. contemplates construction of water-works.

Tex., Princeton.—Princeton Water-Works Co. will expend \$7500 on water-works construction; erect engine and pump house; install 10-horse-power oil engine and 20,000-gallon tank. (Recently noted incorporated by C. A. Wilson and others.)

Tex., Rogers.—City voted bond issue for water-works; Leahy & Hendrick will construct part of system and lay pipe line from Lake Leathrick to city; brick buildings, 115x380 feet, are in course of construction. (Recently mentioned.)

Va., Farmville.—Town voted issuance of \$65,000 of bonds for purchase and improvement of water-works; \$48,000 will be expended in purchase of plant and balance of bond issue for improvements and extension. Address Town Clerk. (Recently mentioned.)

Va., Blacksburg.—City will vote May 16 on issuance of \$12,000 of bonds for construction of water-works and sewerage system; F. W. Eheart, Mayor. (Recently mentioned.)

W. Va., Romney.—City has engaged T. Chalkley Hutton, Wilmington, Del., as designing engineer for water-works estimated to cost \$15,000; reservoir is to be located at Mechanicsburg Gap; bids received until May 1; A. N. McKeever, Mayor. (Recently mentioned.)

WOODWORKING PLANTS

Ga., Dublin.—Buggles.—Dublin Buggy Co. awarded contract to Phillips & Rice of Dublin to erect two-story brick building.

La., Monroe.—Staves.—W. M. Johnson, general manager of Louisiana Stave & Heading Co., Roberline, La., will erect stave factory.

La., Mansfield.—Spokes and Handles.—Mansfield Chamber of Commerce has arranged for establishment of spoke and handle factory.

Mo., Hannibal.—Wagons.—Hannibal Wagon Co. increased capital stock from \$55,000 to \$75,000.

Mo., St. Louis.—Cooperage.—H. D. Williams Cooperage Co. increased capital stock from \$200,000 to \$750,000.

Tex., Longview.—Longview Hardwood Specialty Co. is being organized to establish plant for manufacturing articles from hardwood timber; reported cost, \$100,000.

Tex., Wichita Falls.—Furniture.—Freear-Brin Furniture Co. awarded contract for erection of furniture factory to cost about \$15,000.

Va., Dendron.—Box Shooks.—Surry Lumber Co., Union Trust Bldg., Baltimore, Md., plans remodeling shook factory to conform with Norfolk plant; latter completed last month at cost of about \$300,000, and is equipped with electrically-driven machinery for manufacturing shooks by new system; plans not definitely determined for Dendron remodeling.

Va., Emporia.—Buggles.—E. L. Burruss contemplates establishment of plant to manufacture buggles. (See "Machinery Wanted.")

W. Va., Huntington.—Seating.—Huntington Seating Co. has acquired Thornburg Manufacturing Co.; contemplates enlarging plant and increasing capacity; company manufactures church seats and other furniture, and later will manufacture school furniture.

BURNED

Ala., Pell City.—R. A. Martin's drug store; loss \$10,000.

Ala., Greenville.—Negro Methodist Church; loss \$10,000. Address The Pastor, Negro Methodist Church.

Ark., Arkinda.—McDougall, Sims & Co.'s store; loss \$3000.

Ark., El Dorado.—Kirby Hotel; T. R. Parker's residence; loss \$5000.

Ark., Pocahontas.—Pringle Drug Co.'s store; loss \$12,000.

Fla., Arcadia.—W. H. Hooker's residence in De Soto county; loss \$10,000.

Fla., Brooksville.—Sawmill of H. L. Coe, Tampa, Fla.

Fla., Jacksonville.—Doscher-Gardner Lumber Co.'s plant and Jacksonville Lumber Co.'s plant; total loss about \$200,000.

Ga., Albany.—Dougherty county's guards' quarters, barn, pump-house, bakery and sheds. Address County Commissioners.

Ga., Marietta.—M. R. Lyons' residence at 402 Polk St.

Ga., Pineview.—J. H. Wilson's store; W. M. Jones' stable.

Ky., Lancaster.—Lancaster Electric Light Co.'s plant; loss about \$10,000; Alexander Walter, proprietor.

La., Shreveport.—Building owned by Dr. Fred Nabors of Mansfield, La.

Miss., Wiggins.—R. L. Hollis' residence, owned by R. D. Hall of Clinton, Miss.

Mo., Monett.—Y Steam Laundry; loss about \$4000.

N. C., Asheville.—H. Redwood & Co.'s building; loss \$25,000.

S. C., Greenwood.—Walter Carley's residence.

S. C., Lancaster.—W. T. Phillips' dwelling.

Tenn., Jackson.—Mrs. W. T. Nelson's residence at 139 W. Poplar St.; loss \$2500 to \$3000.

Tenn., Alton Park.—Tennessee, Alabama & Georgia Railroad's car-repair and blacksmith shops; loss about \$7000; C. H. Fisk, chief engineer, Chattanooga, Tenn.

Tenn., Johnson City.—Washington College's dormitory; loss \$20,000.

Tex., Corsicana.—Corsicana Improvement Co.'s two buildings; loss \$25,000.

Tex., El Paso.—City National Bank building damaged; loss \$3000.

Tex., Cisco.—Texas Central Railroad's roundhouse; estimated loss, \$6000; C. Hamilton, general manager, Waco, Tex.

Tex., Fort Worth.—W. J. Bailey's building; loss about \$10,000.

Tex., Greenville.—Harbuck & Son's grocery store; building owned by Mrs. P. E. Christian and Frank Scott; loss \$10,000.

Tex., Newcastle.—Daniels & Timpson's store; loss \$5500.

Tex., San Antonio.—Maverick-Clarke Lithographing Co.'s plant damaged; loss about \$30,000.

Va., Lynchburg.—Academy of Music, Corbin Shield, manager; loss about \$40,000.

Va., Richmond.—A. Hoen Co.'s printing, engraving and lithographing plant at 1169 Bank St.; loss about \$150,000.

W. Va., Pence Springs.—Valley Heights Hotel, owned by B. A. Carney; loss \$20,000.

DESTROYED BY STORM

Okla., Big Heart.—Schoolhouse; loss \$25,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Birmingham.—Miss Mary Anderson and Mrs. G. P. Thornton are having plans prepared by William L. Welton, Empire Bldg., Birmingham, for apartment-house; probably five stories; Maltese-cross shape.

Ark., Little Rock.—Charles T. Abeles will erect apartment-house; 140x140 feet; fire-proof and noiseproof.

D. C., Washington.—H. A. Kite, 1333 G St. N. W., has plans by A. H. Beers, 1342 New York Ave., Washington, for two-story brick store and apartment building at 2505-07 Pennsylvania Ave.; cost \$4000; construction by owner.

Ky., Louisville.—Mary E. Cralle has plans by H. F. Hawes for alterations to apartment-house at 1306 Cherokee Parkway; cost \$16,000.

Md., Baltimore.—Mrs. Jennie Silverstein will expend \$35,000 to erect apartment-house on Windsor Mills Rd.; 85x90 feet; brick; hot-water heat; gas and electric lighting; plans by Henry J. Tinley, 314 N. Charles St., Baltimore. (Recently noted.)

Md., Baltimore.—Herman Schon, 820 Equitable Bldg., will expend \$20,000 to erect apartment-house; 33x90 feet; brick; hot-water heat; gas and electric lighting; plans by Henry J. Tinley, 314 N. Charles St., Baltimore; contractors estimating are L. O. Hildebrand & Son, 2217 E. Preston St.; Thomas B. Stanfield, 109 Clay St.; John A. Sheridan, 806 N. Carrollton Ave., and Peters & Harding Contracting & Building Co., 15 E. Fayette St., all of Baltimore. (Recently noted.)

Okla., Oklahoma City.—John E. Shanafelt, Lock Box 277, will open bids in 30 or 60 days to erect apartment-house; three stories; 50x65 feet; six apartments, four and five rooms each; brick; steam heat; electric lighting; cost \$6000 to \$7000; plans by Van Slyke & Woodruff, Oklahoma Bldg., Oklahoma City, Okla. (Recently noted.)

S. C., Greenville.—D. A. Goodlett is having plans prepared for apartment-house on Buncombe St.; two stories; brick; gas and electric lighting; steam heat; cost \$6000.

S. C., Greenville.—A. W. Stewart Engineering Co., Masonic Temple Bldg., is preparing plans for apartment-house; four stories and basement; 21 apartments with four to seven rooms each; reinforced concrete construction.

Tenn., Chattanooga.—John Shelton of Ridgedale, Tenn., has plans by Huntington & Sears, James Bldg., Chattanooga, for apartment-house; two stories; 16 rooms; brick; stone trimmings; gas and electric lighting; heating not decided; cost \$15,000; will receive bids at once.

Tenn., Nashville.—J. H. Yeaman prepared plans to remodel building into apartment-house; four and five-room apartments; corridors finished in marble and tile; hardwood flooring; dumbwaiters; telephone and speaking tubes; hardwood finishings with oak floors and wainscoting.

Tenn., Nashville.—Mrs. C. H. Butler has plans by C. H. Butler of Nashville for apartment-house; 14 rooms; brick; hot-air heat; gas and electric lighting; cost \$6000; contracts let separately; construction begun; Mr. Butler will supervise work. (Recently noted.)

ASSOCIATION AND FRATERNAL

Ala., Huntsville.—Young Men's Christian Association plans to raise \$15,000 and complete building.

Ala., Selma.—Young Men's Christian Association will erect dormitory.

Ga., Atlanta.—Atlanta Labor Temple Association organized with \$30,000 capital stock; S. B. Marks, president; will erect labor temple.

La., Napoleonville.—Assumption Lodge, No. 30, Ancient Free and Accepted Masons, will erect Masonic temple; three stories; brick.

La., Shreveport.—Elks Club No. 122 received bids at office of Clarence W. King, architect, Majestic Bldg., Shreveport, until April 21 to erect club.

Tenn., Chattanooga.—Young Woman's Christian Association will erect association building. E. Y. Chapin is interested.

Tenn., Clarksville.—Building committee of Independent Order of Odd Fellows' Home selected L. C. Waters, Knoxville, Tenn., to prepare plans for proposed boys' dormitory; pressed brick; stone trimmings; two stories and basement; cost about \$20,000. (Mr. Waters recently incorrectly noted to have received contract for erection of building and structure previously described.)

Tenn., Memphis.—Benevolent Protective Order of Elks will erect clubhouse to contain lodgeroom, clubrooms, cafe, gymnasium, bathrooms, swimming pool, sleeping-rooms, etc.; cost \$150,000; P. Harry Kelly, chairman board of trustees.

Tex., Pecos.—Young Men's Christian Association reported to erect association building.

Va., Portsmouth.—Young Men's Christian Association, C. S. Sherwood, Jr., president, will probably erect building on old jail site; cost \$75,000 to \$100,000; plans not determined.

BANK AND OFFICE

D. C., Washington.—T. Thilman Hendrick, 716 14th St. N. W., and Clarence Norment, 1851 Wyoming Ave. N. W., will repair Herald Building.

D. C., Washington.—Victor J. Evans, Victor Bldg., will erect addition to this structure; six stories; 70x40 feet.

D. C., Washington.—Ben B. Bradford, Bradford Bldg., 908 14th St. N. W., has plans to remodel office building at 1405 I St. N. W.; 50x90 feet; mill construction; steam heat; electric lighting; concrete sidewalks; cost \$100,000; plans by Mr. Bradford; subcontracts; structure will connect with Bradford Bldg. on 14th St.

Fla., Jacksonville.—Barnett National Bank, Laura and Forsyth Sts., awarded contract to Burwell & Hillyer, Jacksonville, to remodel and improve interior of bank; plans call for extension of present vaults back 30 feet, installation of seven additional fire-proof and burglar-proof vaults, reaching from cellar to ceiling; safety-deposit boxes, three mezzanine floors, 19 teller cages and bank desks; entire walls from floor to ceiling of foreign marble with bronze trimmings; steel and soft-colored glass skylight to replace present skylight, etc.

Fla., Lakeland.—Southern Express Co., C. C. Wolfe, general manager, will erect office building.

Fla., Miami.—Bank of Biscayne, James E.

Lummas, president, will remodel present structure and erect addition.

Fla., St. Petersburg.—Central National Bank will receive bids until noon May 9 to erect two and three-story building; reinforced concrete; clay tile roof; steel frame; iron stairways and balconies, plumbing, vacuum steam heating, wiring for electric lights, telephones, etc.; plans from above bank on deposit of \$10, or from Biggers & Muller, architects, 601 Empire Life Bldg., Atlanta, Ga. (Recently noted having plans prepared by above architects.)

Fla., Tampa.—W. T. Boyd is having plans prepared by Bonfoey & Elliott, Tampa, for three additional stories to building at Polk and Franklin Sts.; will install elevator.

Ga., Decatur.—DeKalb County Bank, J. O. Norris, president, contemplates erection of bank building.

Ga., Forsythe.—Ogden Persons' office building (recently noted) will be one-story structure.

Ga., Logansville.—Farmers and Merchants' Bank, J. B. Hodges, cashier, will open bids about May 15 to erect bank building recently noted; 27x72 feet; Georgia granite front and sides; brick walls; cost \$4000; plans by Frank R. Happ, Macon, Ga. (See "Machinery Wanted.")

Ga., Macon.—Atlas Finance Corporation has purchased site and will erect 12 or 15-story office building early part of 1912.

Ky., Anchorage.—Citizens' National Life Insurance Co. has plans by McDonald & Dodd, Louisville, Ky., for proposed building; cost \$50,000.

La., New Orleans.—Tulane Educational Fund will probably erect building to be occupied by Parke, Davis & Co., main office Detroit, Mich., and local offices at 522-524 Common St.; proposed structure to be slow-burning mill construction; about 100x110 feet; cost \$50,000.

Md., Baltimore.—Dr. Charles S. Grindall, 5 E. Franklin St., is having plans prepared by Baldwin & Pennington, Professional Bldg., Charles and Fayette Sts., Baltimore, for office and store building at Charles and Franklin Sts.; four stories; white marble and brick; 40x150 feet; will install electric elevator, gas and electric lights, steam heat and vacuum cleaning plant.

Miss., Yazoo City.—Holmes & Holmes will erect brick office building; eight rooms; two stories.

Okl., Muskogee.—Sequoyah Casualty Insurance Co. will erect fireproof office building; definite plans will not be made for three months. Walter Falwell, member of board of directors, may be addressed.

Okl., Delaware.—Citizens' State Bank will erect bank building.

Okl., Muskogee.—Barnes estate has plans by Wilder & Wright, Kansas City, Mo., to erect office building at 3d and Wall Sts.; 60x118 feet; 10 stories; stone, terra-cotta and brick; iron staircases; tiled corridors; interior finish, mahogany; will install elevators; cost \$250,000.

Tenn., Knoxville.—Holston National Bank of Knoxville, Joseph P. Gaut, president, will not begin erection of bank and office building (previously described) until January 1, 1912; cost \$350,000; plans are being prepared by John K. Peebles, Law Bldg., Norfolk, Va.

Tenn., Nashville.—Builders' Exchange is interested in erection of building for builders.

Tex., Dallas.—C. D. Hill & Co., Dallas, prepared plans for remodeling Trust Bldg. at Main and Austin Sts., including erection of additional story; cost of improvements \$20,000.

Tex., Denison.—Missouri, Kansas & Texas Railway, A. M. Acheson, acting chief engineer, Dallas, Tex., will, it is reported, erect office building at Denison; plans not determined.

Tex., Nixon.—Promoters' Club will erect office and store building; fireproof; cost \$20,000.

Tex., Pecos.—Pecos Land Co. reported to erect two-story office and store building.

Tex., Wharton.—H. J. Bolton, president Wharton National Bank, will erect bank building; one story; brick; 42x100 feet.

Va., Disputanta.—Bank of which A. R. Hobbs is president will erect bank building; white pressed brick; plate-glass windows; cost about \$3000.

Va., Richmond.—Estate of Joseph Bryan will erect brick store and office building; three stories; cost \$50,000.

W. Va., Keyser.—Farmers and Merchants' Bank has selected W. J. Knott, H. G. Steorts and J. R. Bane committee to erect bank.

CHURCHES

Ala., Mobile.—St. John's Episcopal Church will erect Sunday-school building. Address The Rector, St. John's Episcopal Church.

Fla., De Funiak Springs.—Building Committee will receive bids until 10 A. M. May 6 to erect extension and addition to Methodist church; certified check for one-sixth amount of bid; plans and specifications from T. M. McConnell, chairman of building committee.

Fla., Miami.—Christian Church, F. J. Langdon, pastor, will not begin construction of edifice for one year. (Recently noted.)

Fla., Ocala.—Baptist congregation will erect church and parsonage. Address The Pastor, Baptist Congregation.

Fla., Tampa.—Bonfoey & Elliott, Tampa, prepared plans for proposed church building; doric temple style; entrance from front by two swinging doors; seating capacity 500; cost \$28,000.

Ga., Albany.—First Baptist Church will erect edifice; cost about \$30,000. Address The Pastor, First Baptist Church.

Ky., Franklin.—Methodist Episcopal church has plans by Runge & Dickey, 403 Cole Bldg., Nashville, Tenn., for edifice; 64x90 feet; pressed brick; art glass; steel ceiling; cost \$30,000.

La., Lafayette.—St. John's Catholic Church, Rev. Father Teurlings, pastor, plans to erect \$60,000 edifice.

La., Lake Charles.—Catholic congregation adopted tentative plans for church, school and rectory to replace burned structures. Address The Pastor, Catholic Church.

Md., Williamsport.—Zion Lutheran Church, Rev. Upton Blair, pastor, will erect edifice; cost \$12,000 to \$15,000.

Miss., Amory.—R. H. Hunt, James Bldg., Chattanooga, is preparing plans for edifice; brick construction; cost \$15,000.

Miss., Vicksburg.—South Washington Street Methodist Church, Rev. W. H. Saunders, pastor, will erect edifice to cost \$8000 or \$10,000, and has plans by Wm. A. Staunton, First National Bank Bldg., Vicksburg, for \$2000 parsonage.

Miss., West Point.—First Baptist Church is having plans prepared by R. H. Hunt, James Bldg., Chattanooga, for addition to edifice and other improvements; cost \$15,000.

N. C., Asheville.—Methodist Protestant church, Rev. J. S. Williams, pastor, has not determined upon plans for edifice recently reported.

N. C., High Point.—Friends Church will erect granite addition to edifice; will also erect parsonage. Address Board of Trustees, Friends Church.

Okl., Hugo.—Methodist Church, Rev. J. T. Thornton, pastor, has plans for proposed \$20,000 edifice; Choctaw county limestone.

S. C., Great Falls.—Republic Cotton Mills will build church.

S. C., Greenville.—First Presbyterian Church contemplates remodeling of edifice; plans by F. H. & J. G. Cunningham, Greenville.

S. C., Greenville.—First Presbyterian Church, Rev. T. W. Sloan, pastor, plans to remodel church.

S. C., Pickens.—Methodist congregation, Rev. G. F. Kirby, pastor, has plans for erection of \$10,000 edifice.

S. C., Pickens.—Baptist congregation, Rev. C. A. Waters, pastor, will erect church.

Tenn., Union City.—First Christian Church will open bids about June 1 to erect edifice; fireproof construction; steam heat; cost \$15,000; plans by R. A. Heavener, Jackson, Tenn.; for further information address architect. (Recently noted.)

Tex., Bonham.—First Christian Church, E. M. Thompson, chairman, will receive bids until 3 P. M. May 4 to erect reinforced concrete and brick edifice; certified check for \$500; plans and specifications at office of Sparger & Peters, architects, Bonham. (Recently noted.)

Tex., Fort Worth.—First Baptist Church has purchased lot and is reported to erect edifice to cost \$100,000.

Tex., Longview.—First Baptist Church, J. C. Hughes, pastor, has had plans and specifications prepared for \$30,000 edifice.

Va., Richmond.—Decatur Street Methodist Church, Rev. G. T. Forrester, pastor, plans to erect \$11,000 auditorium.

Va., Roanoke.—Primitive Baptist congregation has plans by H. H. Miller, Roanoke, for edifice; 36x50 feet; pressed brick; hot air heating system; electric lighting; granolithic sidewalks; cost \$4000; day labor superintended by Mr. Dent of Roanoke. (Recently noted.)

Tex., Rockdale.—Baptist congregation will

remodel and enlarge edifice; 30x60 feet; ordinary construction; cost of heating plant \$500; art glass windows; cost of improvements \$5000 to \$6000; plans by Hulbert & Co., Waco, Tex.; date of opening bids not set. Address proposals to G. M. Ryan.

Tex., Pecos.—Methodist Episcopal church, Rev. H. M. Smith, pastor, will erect \$25,000 edifice.

Va., Lynchburg.—Trinity Methodist Church will probably erect edifice. Address The Pastor, Trinity Methodist Church.

Va., Norfolk.—Park Place Baptist Church plans to erect edifice; cost \$25,000. Address The Pastor Park Place Baptist Church.

Va., Portsmouth.—Court Street Baptist Church, Rev. R. B. Garrett, pastor, will enlarge and remodel Sunday-school room; 20x60 feet; ordinary construction; brick; gas radiators; electric lighting; cost \$5000 to \$6000; plans by C. M. Major, Portsmouth; bids opened April 24.

W. Va., Charleston.—Calvary Baptist Church will erect edifice. Address The Pastor, Calvary Baptist Church.

CITY AND COUNTY

D. C., Washington.—Mortuary Building.—Bids received by Cuno H. Rudolph, John A. Johnston and Wm. V. Judson, Commissioners, D. C., until April 27 to erect mortuary building at Tuberculosis Hospital, between 13th, 14th, Upshur and Varum Sts. N. W.; cost \$4000; blank form of proposals, specifications, etc., at office of chief clerk, Engineer Department, 427 District Bldg.

Fla., Jasper.—City voted \$2500 bond issue for city hall; brick structure; no heating plant; contract not let; W. H. Greene, bond trustee, may be addressed. (Recently noted.)

Ga., Atlanta.—Municipal Buildings.—Eugene C. Wachendorf, architect, 826 Empire Bldg., Atlanta, will receive bids until May 12 for changes and additions to about 35 buildings on Marietta St., between Tabernacle Pl. and Ponders Ave., for the city; certified check for 5 per cent. amount of bid; plans and specifications on deposit of \$10 for each group of buildings; R. M. Clayton, chief of construction.

Ga., Augusta.—City Hall.—City will erect proposed city hall. Address The Mayor.

La., New Orleans.—Engine House.—City has plans by E. A. Christy, New Orleans, for proposed engine house at Iberville and Alexander Sts.; swiss chalet design; tapestry brick and stucco; full glazed tile roof; gymnasium and baths; cost \$12,500.

Md., Baltimore.—Engine-house.—City purchased site at Light and Montgomery Sts. and will erect proposed engine-house, for which appropriation was previously made; J. Barry Mahool, Mayor.

Miss., Aberdeen.—City Hall.—City has not selected architect to prepare plans for city hall; 100x80 feet; fireproof construction; steam heat; cost \$30,000. Address The Mayor. (Recently noted to vote \$50,000 of bonds to erect city hall, school, paving and sewers.)

Miss., Jackson.—Library.—City will erect Carnegie library to cost \$25,000; A. C. Crowder, Mayor.

Miss., Tupelo.—City voted \$50,000 bond issue to erect city hall, etc. Address The Mayor. (See "Road and Street Improvements.")

Mo., Mexico.—Alms-house.—City voted \$15,000 bonds to erect almshouse. Address The Mayor.

N. C., Raeford.—Hoke County Commissioners are having plans prepared by Milburn, Heister & Co., Home Life Bldg., Washington, D. C., for jail; plans will be ready in four weeks. (Recently noted under "Courthouses.")

Okl., Claremore.—City Hall.—City will probably erect \$17,500 city hall. Address The Mayor.

Okl., Hobart.—Carnegie Library and City Hall.—City plans to erect Carnegie library; also to issue \$50,000 of bonds to erect city hall. Address The Mayor.

Tenn., Covington.—Jail.—John Craig, chairman, will receive bids until April 29 to erect addition to and repair Tipton county jail; certified check for \$500; plans and specifications by Pauly Jail Building Co. of St. Louis, Mo., at office of Mr. Craig.

Tenn., South Pittsburg.—City contemplates voting \$40,000 of bonds to erect public buildings. Address The Mayor.

Tex., Anahuac.—Jail.—Chambers county will vote June 10 on \$43,000 bond issue to erect courthouse and jail. Address County Commissioners.

Tex., Calvert.—City Hall.—City defeated \$25,000 bond issue to erect city hall. Address

The Mayor. (Previously noted to vote on this issue.)

Tex., Fort Worth.—Fire Halls.—City opened bids to erect three proposed fire halls; McFarland-Neff Construction Co., Fort Worth, is lowest bidder at \$32,000. (Previously noted as voting bond issue to erect these structures.)

Tex., Paris.—Rest Building.—City has plans by Barry & Smith, Paris, for proposed rest station; 41 feet square; four fronts.

Tex., Pecos.—Jail.—Board of County Commissioners of Reeves county will award contract to erect jail to cost \$11,000. (Recently noted.)

Tex., Snyder.—Jail.—Scurry county voted issuance of \$16,000 bonds to erect jail. Address County Commissioners. (Lately noted.)

Tex., Terrell.—City Hall.—City Commission, H. Galbraith, chairman, contemplates erection of city hall; plans not determined.

Va., Martinsville.—Jail.—J. H. Matthews, clerk of Board of Supervisors of Henry County, will receive bids until May 19 to erect brick jail; certified check for \$500, payable to clerk as above; plans and specifications on deposit of \$10.

Va., Norfolk.—Police Station.—City has selected site corner Bowden Ferry Rd. and Pocahontas Ave. to erect Fourth Precinct Police Station. Address The Mayor.

W. Va., Beckley.—Raleigh county plans to erect jail; M. J. Meadows, County Clerk.

W. Va., Charleston.—Library.—City is planning to erect library; Malcolm Johnson, George F. Coyle, William B. Mathews and others, committee.

W. Va., Wheeling.—County Infirmary.—Ohio County Commissioners contemplate improvements to infirmary.

COURTHOUSES

La., Ville Platte.—Parish of Evangeline will advertise for bids about July 1 to erect courthouse; two stories and basement; fireproof construction; hot-water heat; cost \$70,000; plans by Emile Well, 1312 Whitney-Central Bldg., New Orleans, La. (Recently noted.)

Mo., Springfield.—Greene county is reported to have voted \$150,000 bond issue to complete \$250,000 courthouse. Address County Commissioners.

N. C., Raeford.—Hoke County Commissioners will expend \$50,000 to erect courthouse; plans by Milburn, Heister & Co., Home Life Bldg., Washington, D. C.; architects will have plans ready in about four weeks. (Recently noted.)

Okl., Muskogee.—City will furnish site and Muskogee county will issue bonds to erect joint county and municipal building; 12 stories; cost \$500,000. Address Mayor or County Commissioners.

S. C., Greenville.—Greenville county will vote August 8 on issuance of \$100,000 courthouse bonds. Address County Commissioners.

Tenn., Benton.—Polk County Commissioners will not erect addition to courthouse as recently stated; addition will be made to county jail. (See "City and County.")

Tex., Anahuac.—Chambers county will vote June 10 on \$43,000 bond issue to erect courthouse and jail. Address County Commissioners.

Tex., Nacogdoches.—Nacogdoches county plans to issue \$90,000 of bonds to erect courthouses. Address County Commissioners.

W. Va., Williamson.—Mingo County Commissioners will open bids at noon May 10 (extended date) to erect addition to courthouse; 60x60 feet; fireproof construction; cost \$42,000 to \$50,000; certified check for \$500, payable to County Clerk, James Dawson; plans and specifications on file with Clerk and H. Rus Warne, architect, Charleston, W. Va. (Recently noted.)

DWELLINGS

Ala., Birmingham.—Birmingham Realty Co. will erect two-story frame residence; cost \$3000.

Ala., Birmingham.—J. L. Haggard, 122 Almond St., West End, will erect several dwellings; ordinary construction; grates and furnace; electric lighting; cost \$1600 to \$2200 each; plans and construction by owner. (Recently noted.)

Ala., Chalkville (not a postoffice).—Pat Oliver, Birmingham, Ala., will erect residence.

D. C., Washington.—Charles W. King, Jr., 1519 Monroe St. N. W., will erect six residences, five and six rooms, at 13th and Euclid Sts. N. W.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., will erect one two-story brick

store and dwelling at 644 H St. N. E.; 17x40 feet; ordinary construction; furnace; cost \$4000; plans by E. Hauser, 37 New York Ave. N. E., Washington; construction by owner.

D. C., Washington.—James Martin, 606 Colorado Bldg., has plans by Miller & Miller, Washington, for three two-story brick dwellings in Park Rd.; interior finish of Western ash.

D. C., Washington.—E. M. Dulin, 1270 New Hampshire Ave. N. W., will erect three two-story brick dwellings at 1025-29 20th St. N. W.; cost \$60000; plans and construction by owner.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., will erect 10 two-story six-room residences on 14th St. N. W., near Spring Rd.

D. C., Washington.—W. E. Pickford, 1847 4th St. N. W., has plans by W. J. Simmons, 1719 New Jersey Ave. N. W., Washington, for three one-story frame dwellings on Conduit Rd. N. W.; cost \$3000; construction by owner.

D. C., Washington.—William A. Hill, 1333 G St., and Franklin T. Sanner, 1800 Adams Mill Rd. N. W., will erect residence on Woodley Rd. N. W.; colonial style; cost \$25,000.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for 21 two-story brick dwellings at 141-181 V St. N. E.; cost \$31,500.

D. C., Washington.—Louis C. Lehr, 2033 Florida Ave. N. W., will erect residence at New Hampshire Ave. and R St.

Fla., Ocala.—Baptist congregation will erect parsonage and church. Address The Pastor, Baptist Church.

Fla., Tampa.—Manuel Sanchez will erect dwelling; cost \$3000.

Ga., Atlanta.—R. H. McGruder will erect residence at 315 E. Pine St.; cost \$4000.

Ga., Atlanta.—R. K. McMillan will erect residence at 548 Highland Ave.; cost \$3500.

Ga., Atlanta.—J. Spielberger will erect residence; cost \$4300.

Ga., Atlanta.—L. C. Kalb will erect two dwellings; cost \$3200.

Ga., Atlanta.—Fulton House Builders will erect dwelling at 118 9th St., to cost \$4500, and one on Springfield Rd. to cost \$9000.

Ky., Louisville.—Crown Realty Co. will erect two frame dwellings; cost \$4000.

La., Lake Charles.—Catholic congregation will erect church, school and rectory to replace burned structures. Address The Pastor, Catholic Church.

La., New Orleans.—L. A. Hubert will erect single two-story frame residence; cost \$5000.

La., New Orleans.—Mrs. Nina Bass will erect double brick cottage; cost about \$3000.

La., New Orleans.—Dixie Homestead Association will erect single frame cottage; cost \$3400.

La., New Orleans.—M. J. Henry will erect residence; two stories; cost \$5000.

La., New Orleans.—Hill Investment Co. will erect two-story frame dwelling.

La., New Orleans.—I. H. Vantrenchon will erect residence; two stories; stucco; cost \$5000.

La., Thibodaux.—I. Ber will erect residence.

Md., Baltimore.—Edward Hanes, Hickory Ave., near 3d St., Hampden, has plans by John R. Forsythe, 232 St. Paul St., Baltimore, for two dwellings; 15x45 feet; ordinary construction; hot-water heat.

Md., Baltimore.—Frank Novak, 2903 Jefferson St., is having plans prepared by Joseph F. Hirt, 2903 Jefferson St., Baltimore, for 18 two-story dwellings at 201-229 and 200-204 N. Curley St.; iron-spot brick construction; 12x40 feet; cost \$14,500.

Md., Baltimore.—George R. Morris will erect dwelling; 20x30 feet; frame; hot-water heat; gas and electric lighting; cost \$4000; plans and construction by owner. (Recently noted to erect cottage on Chatham Rd.)

Miss., Gulfport.—W. D. Barry will erect eight-room two-story brick veneer dwelling; cost \$4000.

Miss., Vicksburg.—South Washington St. Methodist Church has plans by Wm. A. Staunton, Vicksburg, for parsonage. (See "Churches.")

Md., Roland Park.—Charles C. Hazell, 513 Forrest Rd., is having plans prepared by E. L. Palmer, 408 Roland Ave., Roland Park, for residence; two and a half stories; frame and stucco construction; slag roof.

Mo., Kansas City.—Charles R. Russell of Russell Brokerage Co. will erect residence.

Mo., Kansas City.—Millard Russell will erect residence.

Mo., Kansas City.—L. L. Hannah will erect stone-veneer dwelling; cost \$3000.

Mo., Kansas City.—H. Artman will erect stone and stucco dwelling; cost \$6000.

Mo., Kansas City.—R. McMenamin will erect stone-veneer dwelling; cost \$3000.

Mo., Kansas City.—Mary Kemper will erect brick-veneer dwelling; cost \$3350.

Mo., Kansas City.—T. O. Wheeler will erect stone-veneer dwelling; cost \$3000.

Mo., Kansas City.—A. J. King Realty Co., 12 E. 9th St., will erect 50 or more bungalows; California style; two stories; 7 to 12 rooms; mill construction; hot-air and hot-water heat; cost \$4000 to \$12,500 each. (Recently noted.)

N. C., Durham.—F. H. Nicholson will erect residence.

Okla., Oklahoma City.—C. P. Sites will erect residence; one story; frame; cost \$4000.

Okla., Oklahoma City.—Mrs. J. A. Dunn will erect one-story frame dwelling; cost \$4000.

Okla., Oklahoma City.—Leva Henry will erect two-story frame and brick veneer dwelling; cost \$8000.

Okla., Oklahoma City.—E. E. Cole will erect residence; one story; frame; cost \$3000.

S. C., Greenville.—J. C. Milford is having plans prepared for dwelling; two stories; 10 rooms; frame and shingle; cost \$4500.

S. C., Manning.—Dr. H. L. Wilson is reported to erect dwelling.

S. C., Manning.—Manning Presbyterian Church is reported to erect manse.

Tenn., Bristol.—H. E. Jones, president of Dominion National Bank, is reported to erect residence; cost \$30,000 to \$40,000.

Tenn., Chattanooga.—J. D. and W. B. Hudson, 123 Oak St., will receive bids at once to erect dwelling; 8 rooms; two stories; brick; plans by J. G. Barnwell and Clarence T. Jones, Chattanooga.

Tenn., Chattanooga.—J. H. Parham is having plans prepared by J. G. Barnwell and Clarence T. Jones for residence on Fort Wood St.; 10 rooms; brick and stucco; hot-water heat; gas and electric lighting.

Tex., Cuero.—Joseph Sheridan will erect residence corner Broadway and Indianola Sts.

Tex., Galveston.—Mrs. W. F. Breath will erect three residences.

Tex., McKinney.—J. Perry Burrus, president of McKinney Cotton Mill Co., will erect residence.

Tex., McKinney.—J. Perry Burrus is reported to erect \$30,000 dwelling.

Tex., Mount Pleasant.—J. M. Badt will erect residence; brick; cost \$6000 to \$7000.

Tex., Houston.—J. W. Dittmar will erect eight-room residence; cost \$3500.

Tex., San Angelo.—Dr. A. H. Seeley is reported to erect \$4000 dwelling.

Va., Chesterfield County.—David Dunlop, Petersburg, Va., purchased mansion on Ellerslie farm and will expend \$18,000 to \$20,000 for improvements.

Va., Norfolk.—W. H. White, Jr., will receive bids through Ferguson, Calrow & Taylor, architects, Norfolk, until May 1 to erect residence; cost about \$15,000. (Recently noted.)

Va., Norfolk.—E. A. Odenhal has plans by A. C. Freeman, Norfolk, for residence; cost \$4000; bids received until April 28.

GOVERNMENT AND STATE

Ark., Little Rock.—Asylum.—Legislature appropriated \$100,000 to erect annex to State Insane Asylum; George W. Donaghey, Governor.

Ala., Montgomery.—Capitol.—State of Alabama, Emmet O'Neal, Governor, will erect wing to State capitol; cost about \$100,000.

Fla., Fort Dade.—Postoffice.—Constructing Quartermaster will receive bids until May 15 for moving, repairing and altering post-office building No. 10.

Ga., Dublin.—Postoffice.—Treasury Department, Office of Supervising Architect, Washington, D. C. Sealed proposals will be received in this office until 3 P. M., June 6, and then opened for construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring and lighting fixtures), of United States post-office at Dublin, in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Dublin or at this office at discretion of Supervising Architect.

Ky., Hopkinsville.—Asylum.—State Board of Control for Charitable Institutions will receive bids at office of superintendent of Western Kentucky Asylum for Insane until 10 A. M. May 6 for material and labor for installation of plumbing and construction of terrazo floors and wainscot in wards A,

B, C, D, E and F; certified check for 5 per cent. amount of bid, payable to above board; plans and specifications at office of superintendent at Hopkinsville or of D. X. Murphy & Bro., architects, Louisville.

Ky., Ironton.—Armory.—Armory Commission, Frankfort, Ky., is considering purchase of building for \$10,000 and expending \$10,000 additional to remodel for armory.

La., Lafayette.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, will erect proposed postoffice building at Jefferson and Vermillion Sts.

Md., Sykesville.—Asylum.—Governor of Maryland will receive bids at his office in Union Trust Bldg., Baltimore, Md., until noon May 8 for construction of power-house and building known as cottage "E" women's group, at Springfield State Asylum; plans and specifications at office of Parker, Thomas & Rice, architects, Union Trust Bldg., Baltimore, after April 25, or may be had on deposit of \$5. (Previously noted.)

Tenn., Dyersburg.—Postoffice.—Treasury Department, Office of Supervising Architect, Washington, D. C. Sealed proposals will be received in this office until 3 P. M. May 29, and then opened, for construction complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring) of United States postoffice at Dyersburg in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Dyersburg or at this office at discretion of supervising architect.

Tex., Corsicana.—Dormitory.—State will receive bids at office of Judge J. H. Rice, president of board of managers, until 2 P. M. May 1 to erect boys' dormitory; certified check for \$1000 with bids on general contract, and for 10 per cent. amount of bid with bid for plumbing, heating and wiring; plans and specifications at office of C. H. Page & Bro., architects, Austin, Tex., or may be had on deposit of \$20. (Recently noted to receive bids until May 2.)

Tex., Dallas.—Fair Buildings.—Bids will be received until noon May 1 for general contract of live-stock pavilion for State Fair of Texas at the Fair Park, Dallas; plans and specifications at Thomson & Harrison's office, Wilson Bldg., Dallas.

Tex., McKinney.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, opened bids to erect postoffice building to cost about \$60,000; George Hinchliff Company of Chicago, Ill., is lowest bidder at \$54,650; limestone construction. (Recently noted to receive bids until April 21.)

Tex., Sulphur Springs.—Postoffice.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals will be received at this office until 3 P. M. May 31, and then opened, for construction complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring) of United States post-office at Sulphur Springs in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Sulphur Springs, or at this office, at discretion of supervising architect.

HOTELS

Ala., Fayette.—Grimsley Bros. will expend \$20,000 to erect hotel and store building; 100x120 feet; ordinary construction; plans by H. Wheelock, Birmingham, Ala.; bids opened April 20. (Recently noted.)

Fla., St. Augustine.—Central Hotel will erect addition to hotel; four stories; 62x76 feet; dining-room on first floor to seat 150 guests; will also remodel present structure.

La., Donaldsonville.—Donaldsonville Hotel Co., recently reported incorporated with \$25,000 capital stock, Meyer Leman, president, is having plans prepared by Favrot & Livaudais, New Orleans, to erect hotel; three stories; 40 rooms; cost \$30,000.

La., Oak Grove.—C. James will rebuild hotel and business building recently reported burned. (See "Stores.")

S. C., Cheraw.—Maynard & Raley will expend \$10,000 to erect hotel; two stories; 20 bedrooms; 52x93 feet; ordinary construction; plans by E. V. Richards, Bennettsville, S. C.; day labor; construction begun. (Recently noted.)

Tex., Georgetown.—Hume estate will enlarge capacity of City Hotel; construct 35 rooms, etc.

Tex., Hedley.—W. Nippert will erect hotel.

Tex., Snyder.—Dr. A. O. Scarborough will convert building into hotel and erect addition. (See "Theaters.")

Va., Lynchburg.—W. W. Lynn, proprietor Hotel Carroll, contemplates erection of additional hotel.

Va., Norfolk.—Morgan B. Ellis and A.

Cheatwood, Richmond, Va., and J. W. Hope, Hampton, Va., will erect 200-room fireproof hotel at amusement resort on Chesapeake Bay. (See "Land Developments.")

MISCELLANEOUS

Ala., Decatur.—Hospital.—Ladies' Benevolent Society plans erection of hospital.

Ark., Fort Smith.—Clubhouse.—Fort Smith Country Club will not erect clubhouse. (Recent report an error.)

Fla., Pensacola.—Clubhouse.—De Silva & Ferriss have plans by S. L. Davis for clubhouse; 40x90 feet; ordinary mill construction; cost \$3000; to be occupied by Pensacola Yacht and Motor Boat Club. (Recently noted.)

Fla., Tampa.—Hospital.—Dr. J. B. Holmes, Valdosta, Ga., will expend \$12,000 to remodel building for hospital; will add extra rooms, install elevator, etc.; provide servants' quarters and barns.

Ga., Augusta.—Orphanage.—Augusta Orphan Asylum, James L. Fleming, president, purchased site and will erect orphanage; cottage system.

La., St. Bernard.—Crescent City Carnival Club will erect pavilion; 40x100 feet.

Md., Lonaconing.—Parish-house.—St. Peter's Episcopal Church will erect parish-house; James R. Anderson, Aleck Sloan and others, vestrymen.

Miss., Iuka.—Clubhouse, etc.—J. Cary Thompson, Birmingham, Ala., and associates have plans by Whilldon & Price, Birmingham, Ala., for clubhouse, bathhouses, etc. (See "Land Developments.")

Md., Roland Park.—Hospital.—Children's Hospital School, Dr. Wm. S. Baer, 4 E. Madison St., Baltimore, Md., accepted preliminary plans by Otto G. Simonson, American Bldg., Baltimore, Md., for hospital; two stories; cost about \$30,000; plans to be completed next week.

Mo., Kansas City.—Cafe.—Albert G. Berlina leased building at 1108-1110 Grand Ave., and is reported to expend \$100,000 to remodel and equip for cafe.

Mo., St. Louis.—Hospital.—St. Joseph's Convent of Mercy plans to expend about \$300,000 to erect proposed St. John's Hospital.

Mo., St. Louis.—Dance Hall.—Woods & Nathan will erect one-story dance hall; cost \$35,000.

Okla., McAlester.—Hospital.—All Saints' Hospital will expend \$15,000 for improvements.

Okla., Tulsa.—Natorium.—E. F. Hannan and J. D. Wynn have plans by Lee Mathews, Tulsa, for natatorium; 50x90 feet; concrete and cement; gas heating; electric lighting; cost \$4500; bids opened April 25. (Recently noted.)

S. C., Greenville.—Sanitarium.—Drs. Jervey & Jordan are having preliminary plans prepared for sanitarium; three stories; 58x150 feet; brick; steam heat; gas and electric lighting; two stores will occupy ground floor.

Tenn., Chattanooga.—Laboratory.—Voigt & Company contemplate erection of laboratory on Chestnut St.; plans not made.

Tenn., Memphis.—Hospital.—Home for Incapables has plans by Harker & Cairns to erect addition to hospital; 84 rooms; fireproof; bathrooms, sun porches, elevators, etc.; cost \$40,000.

Tex., Cleburne.—Hospital.—King's Daughters will erect hospital; two stories.

Tex., Houston.—Literary Building.—Jewish Literary Society, 106 San Jacinto St., has plans by S. Brandes, Franklin and Jackson Sts., Houston, for literary building; 45x100 feet; frame; cost \$4000; no contracts. (Recently noted.)

Tex., Denison.—Clubhouse.—Denison Rod and Gun Club awarded contract at \$5000 to W. K. Cravens of Denison to erect clubhouse; two stories and basement.

Tex., Waco.—Sanitarium.—Dr. H. W. Lingsweller, Fort Worth Medical College, Fort Worth, Tex., is reported to erect three-story sanitarium at 1400 S. 5th St., Waco.

Tex., Wharton.—Hospital.—Dr. G. L. Davidson is interested in erection of \$10,000 hospital.

RAILWAY STATIONS

Fla., Panama City.—Atlanta & St. Andrews Bay Railway, B. W. Steele, general manager, Dothan, Ala., will erect freight and passenger depot, including freight warehouse to contain not less than 1200 square feet of floor space, platform and shed for handling freight, white and negro waiting-rooms, former to contain not less than 400, the latter 200 square feet of floor space; covered passenger platform along track at least 120 feet long.

Ga., Ocilla.—Atlanta, Birmingham & Atlantic Railroad, Alex. Bonnyman, general manager, Atlanta, Ga.; Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., and Ocilla Southern Railroad, J. A. J. Henderson, president, Ocilla, Ga., have plans for erection of brick veneer depot.

Ky., Nortonville.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., and Illinois Central Railroad, A. S. Baldwin, chief engineer, Chicago, Ill., are reported to erect union freight depot.

N. C., Thomasville.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., is reported to erect passenger station.

S. C., Dillon.—North & South Carolina Railway, J. E. Hancock, manager, Hamlet, N. C., will erect depot.

S. C., Pickens.—Pickens Railroad, J. P. Carey, president, will erect freight and passenger station; construction begun.

Tex., Bailey.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., contemplates erection of passenger station.

Tex., Comanche.—F. H. Britton, president St. Louis Southwestern Railway of Texas, St. Louis, Mo., may be addressed relative to erection of freight and passenger station recently reported.

Tex., Hillsboro.—Missouri, Kansas & Texas Railway Co., S. B. Fisher, consulting engineer, St. Louis, Mo., is reported to erect union station.

Tex., Waterman.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., will erect depot.

Tex., Wharton.—Galveston, Harrisburg & Santa Fe Railway Co., A. V. Kellog, chief engineer, Houston, Tex., is reported to erect depot.

SCHOOLS

Ala., Talladega.—Alabama Synodical College has plans by Miller & Martin, Birmingham, for college building; pressed brick; stone or marble trimmings; slate roof; colonial style; four white-marble columns at front and several balconies for students; steam heat; electric lights; tiled floors in bathrooms, of which there will be four on each floor; four fireproof stairways; two fireproof walls protecting main building from wings; automatic fireproofs; four lines of three-inch hose attached to plug on each floor; cost about \$40,000. (Recently noted as having plans prepared for this structure.)

Ala., Marion.—Marion Female Seminary, J. M. Batte, president, will expend \$25,000 to erect buildings and repairs.

D. C., Washington.—Allan T. Harrison is lowest bidder at \$27,420 for erection of school at 1st and I Sts.; Cuno H. Rudolph, John A. Johnston and William V. Judson, District School Commissioners. (Lately noted.)

Ga., Atlanta.—Georgia School of Technology plans to erect school hospital.

Ga., Blackshear.—Presbyterian Institute plans to erect dormitory to replace present structure.

Ga., Barnesville.—City voted \$35,000 bond issue to erect additional building at Gordon Institute; Jere M. Pound, president.

Ga., Dalton.—Board of Education has plans by Charles Carlton, Anniston, Ala., for school buildings; will expend \$20,000.

Ga., Dalton.—Board of Education has plans by Charles Dalton, Anniston, Ala., for school buildings; will expend \$20,000; contract will be let on or about May 1 for one 10-room and one 6-room brick structures; Floyd T. Farrar, secretary-treasurer.

Ga., Forsyth.—City will erect school; cost \$25,000. Address The Mayor.

Ky., Nicholasville.—City plans to erect addition and remodel white graded school; cost \$15,000. Address The Mayor.

La., Jena.—School district No. 1 will open bids about June 15 to erect school building; fireproof construction; brick or reinforced concrete; plans not determined; cost \$30,000; address proposals to J. W. Carter. (Recently noted.)

La., Plaquemine.—City is planning to erect proposed high-school building. Address The Mayor.

La., Lake Charles.—Catholic congregation will erect church, school and rectory to replace burned structures. Address The Pastor of Catholic Church.

La., Mount Herman.—City will probably vote on special tax to erect school. Address The Mayor.

Md., Baltimore.—Board of Estimates approved ordinance to purchase site and establish \$50,000 school in West Arlington.

Md., Lonaconing.—Board of School Commissioners, A. C. Willison, secretary, Cum-

berland, Md., will open bids April 29 to erect school building; 22x74 feet; ordinary construction; steam heat; incandescent lights; cost \$13,000; plans by George F. Sanabury, 9 Citizens' Bank Bldg., Cumberland, Md. (Recently noted.)

Miss., Biloxi.—Seashore Camp, Ground School Association, J. S. Otis, Logtown, Miss., president, selected building committee to prepare plans and award contract to erect Methodist school.

Miss., Hattiesburg.—Governor E. F. Noel selected R. H. Hunt, Chattanooga, Tenn., to prepare plans for Mississippi State Normal School, including \$100,000 administration building, two \$60,000 dormitories, president's home and power plants; total cost \$250,000. (Previously noted.)

Miss., Maben.—City will vote on issuance of \$10,000 bonds to erect schools; plans not made; heating plant will cost \$2000; George W. Cooke, Mayor.

Miss., Maben.—Board of Aldermen will issue \$16,000 of bonds to erect brick high-school building; will remodel present structure for dormitory for boarding students.

Mo., St. James.—City voted \$3000 of bonds to erect schools. Address The Mayor.

Mo., St. Louis.—Forest Park University plans to erect additional building for living quarters for students and laboratory.

Mo., St. Louis.—Commissioner of School Buildings was authorized to proceed with plans for proposed school as follows: Six-room school to replace Delaney negro school at Carondelet; Alabama Avenue school; Southern high school; Penrose school, and Wise Avenue school; city also awarded contract to erect Benton school and addition to Simmons school; also having plans prepared for reconstruction of Washington, Froebel, Wheatley and Bryan Hill schools, and alterations to other schools; bids received for Washington and Froebel schools May 4; H. C. Toensfeldt, Commissioner of School Buildings.

Mo., Trenton.—City voted \$15,000 school-repair bonds. Address The Mayor.

N. C., Asheville.—George S. Powell is chairman of committee to select site for proposed building at Asheville for North Carolina School for Feeble-Minded.

Okla., Anadarko.—City will expend \$15,000 to erect school building; 50x85 feet; hot-air heat; fan system of ventilating; electric lighting; plans by Van Slyke & Woodruff, 419 Oklahoma Bldg., Oklahoma City, Okla.; date of opening bids not set; L. M. Spivey, clerk. (Recently noted.)

Okla., Muskogee.—City voted \$175,000 bond issue to erect school buildings. Address The Mayor. (City recently noted to vote April 18 on this issue.)

Okla., Norman.—State University, J. C. Monnett, dean, has preliminary plans by Shepley, Rutan & Coolidge, official architects of the university, for proposed law school.

Okla., Oklahoma City.—City will probably vote May 9 on \$165,000 bond issue for school improvements as follows: Eight-room structures in Edgewood addition, Emerson school site and Jefferson Park addition; four-room additions to Eugene Field and Culbertson Heights schools; also to erect frame annexes at cost of \$10,000. Address The Mayor.

Okla., Oktaha.—Town will issue \$7000 of bonds to erect school to replace burned structure. Address Town Clerk.

Okla., Stillwater.—College Committee of the Board of Regents of Agricultural and Mechanical College, Stillwater, invites architects to submit sealed sketch plans, addressed to Benjamin F. Hennessy, secretary of State Board of Agriculture, Oklahoma City, Okla., until noon April 28, G. T. Bryan, president Board of Agriculture, for chapel and library building to cost \$74,000 complete, with heating, lighting and plumbing; also engineering building to cost \$65,000 complete, with plumbing, heating, together with the price at which they will furnish complete plans and specifications.

S. C., Great Falls.—Republic Cotton Mills will build school.

S. C., Greenville.—Chicora College, S. C. Byrd, president, plans to expend \$50,000 for improvements and erection of additional building.

S. C., McCormick.—City contemplates voting issuance of \$12,000 of bonds to erect school building. Address Superintendent of Schools.

S. C., Turberville.—Trustees of School District No. 29 of Clarendon county will erect \$5000 school building. Address D. L. Green, member Board of Trustees.

Tenn., Memphis.—City sold \$30,000 worth of bonds and will erect high-school building; T. Kennedy, Mayor.

Tex., Austin.—University of Texas plans

to erect \$75,000 gymnasium; T. W. Gregory, chairman of athletic council.

Tex., Brenham.—Prairie High School District of Washington county, Wm. R. Ewing, Judge, will vote May 13 on special tax for school improvements.

Tex., Cuero.—City will vote May 22 on issuance of \$10,000 bonds for enlargement and repair of school. Address The Mayor.

Tex., Houston.—City plans to erect model school to cost \$75,000. Address The Mayor. (Recently noted to vote May 23 on \$500,000 bond issue for school improvements.)

Tex., Jourdanton.—City will vote May 1 on issuance of \$22,000 school-building bonds. Address The Mayor.

Tex., Kyle.—School Board opened bids to erect school; W. H. Birkner, Lockhart, Tex., is lowest bidder at \$10,500; plans by R. L. Pierce of San Antonio, Tex. (Previously noted to erect this structure.)

Tex., Moran.—Moran Independent School District voted \$10,000 of school-building bonds. Address School Commissioners.

Tex., Navasota.—School Board, Jesse Jouens, secretary, will expend \$25,000 to erect manual training school; 70x100 feet; ordinary construction; heating and lighting not determined; plans by Waller & Field, Fort Worth, Tex.; bids opened April 21. (Recently noted.)

Tex., Palacios.—Palacios Independent School District will vote May 6 on \$25,000 bond issue to erect school. Address School Board.

Tex., Richmond.—School Board of Richmond Independent School District plans issuance of \$20,000 of bonds to erect school.

Tex., Seguin.—Lutheran Synod plans to erect college; W. J. Blumberg is interested.

Tex., Shafter Lake.—Shafter Lake School District voted bond issue to erect school. Address District School Trustees.

Tex., Terrell.—Wesley College is planning to erect \$20,000 brick dormitory.

Va., Burkeville.—Burkeville Agricultural High School trustees will expend \$15,000 to erect school building.

Va., Cape Charles.—Cape Charles School Board, J. W. Jones, clerk, will open bids about May 15 or 20 for erection of high-school building; 72x92½ feet; fireproof construction; steam heat; cost \$20,000; plans by P. H. Kea, Cape Charles. (Recently noted.)

W. Va., Beckley.—District Board of Education plans erection of high-school building; brick or stone; about 12 rooms; cost \$40,000 to \$50,000.

W. Va., Clarksburg.—Board of Education contemplates \$275,000 bond issue to erect graded school on east side of Park Ave. and west of 6th St.

W. Va., Moundsville.—Bethany College opened bids for proposed Ogleby Hall; Batson & Burton, Moundsville are lowest bidders and will probably receive contract.

STORES

Ala., Birmingham.—Mackey & Son and Smith Manufacturing Co. will erect additional store to stores.

Ala., Fayette.—Grimsley Bros. will erect store and hotel building to cost \$20,000. (See "Hotels.")

Ala., Leeds.—Whitmore & Sons will open bids May 1 to rebuild store; two stories; fireproof construction; will install elevator. (Recently reported burned.)

Ark., Little Rock.—J. E. England will erect business building; 118x150 feet.

D. C., Washington.—H. A. Kite, 1333 G St. N. W., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for store and apartment-house. (See "Apartment-houses.")

Fla., St. Petersburg.—H. R. Binnie and Ed. L. Lewis will erect business building; two stories; brick.

Fla., Tampa.—Bonfoey & Elliott, Tampa, prepared plans for two-story brick grocery store.

Fla., West Palm Beach.—A. G. Garzo purchased site and will erect building; 21x109 feet; tile floor; plate-glass windows; plans by W. W. Maughlin.

Ga., Atlanta.—George W. Parrott will erect store building to be occupied by M. Bodenheimer & Bros.; three stories and basement; mill construction; sprinkler system.

Ga., Atlanta.—Paul Goldsmith and Arthur Smart will erect business building.

Ga., Brooks.—Boykin Bros. will open bids May 1 to erect store building recently noted; 31x55 feet; two stories; fireproof construction; acetylene lighting; company will supervise construction; plans also by company. (See "Machinery Wanted.")

Ga., Jackson.—Leach & Co. will erect business building.

La., Bunkie.—Anthony Gen will erect stone building; construction begun.

La., New Orleans.—Andrew Fitzpatrick will erect business building; two stories; brick; cost \$15,000.

La., Oak Grove.—C. James will rebuild store and hotel building; 70x100 feet; two stories; to contain four stores; fireproof construction; concrete and cement blocks. (Recently reported burned.)

Md., Baltimore.—Dr. Charles S. Grindall, 5 E. Franklin St., is having plans prepared by Baldwin & Pennington, Professional Bldg., Charles and Pleasant Sts., for store and office building at Charles and Franklin Sts. (See "Bank and Office.")

Mo., St. Louis.—Peter A. O'Neil Estate will expend \$40,000 for improvements to building at 6th and St. Charles Sts.; will lease to Hilts Shoe Co.

N. C., Charlotte.—Charlotte Bonded Warehouse Co. will erect business building.

Okla., Chickasha.—S. H. Kress & Co., 396 Broadway, N. Y., will erect store building.

S. C., Columbia.—John J. Cain is having plans prepared to erect four store buildings; two buildings two stories and two three stories; each 25x100 feet; brick.

S. C., Manning.—Leon Weinberg will soon let contract to erect two stores.

S. C., Spartanburg.—George W. Heinlsh has plans by W. B. W. Howe of Spartanburg to rebuild business building; two stories; ordinary construction; brick; day labor under supervision of A. E. Abbott of Spartanburg. (Previously reported burned.)

Tenn., Bristol.—Huntsman Bros. Company has plans by G. W. Burnett, Bristol, for store building; 50x156 feet; three stories and basement; ordinary construction; cost \$12,000 to \$14,000. (Recently noted.)

Tenn., Knoxville.—C. M. McClung & Co. will erect addition to building; 100x125 feet; brick; seven stories; mill construction; sprinkler system; two electric elevators.

Tenn., Knoxville.—Kuhlman & Simpson are having plans prepared by Baumann Bros., Knoxville, for five stores; two stories; frontage 25 feet.

Tex., Arlington.—Dr. G. N. Hutcheson will receive bids until 2 P. M. May 8 to erect two-story brick store, 100x105 feet; certified check for \$500, payable to Dr. Hutcheson; plans and specifications at his office.

Tex., Dallas.—Dan Sonnetheil has plans by C. D. Hill & Co., Dallas, for five-story reinforced concrete business building; cost \$40,000; Will Gill, Dallas, will superintend construction.

Tex., Dallas.—Cullen F. Thomas of Cockrell, Gray & Thomas purchased site 143x131 feet and will erect store buildings.

Tex., El Paso.—J. L. Bullis will erect business building.

Tex., Fort Worth.—T. J. Smith, 614 Calhoun St., will erect brick business building.

Tex., Fort Worth.—Hint-Hawes Company will erect store corner East 7th and Grove Sts.; five stories; 100x100 feet; steel and reinforced concrete brick; cost \$20,000.

Tex., Houston.—John Finnigan will erect business building; one story; brick; 50x90 feet; 20 feet high; cost \$13,000.

Tex., Longview.—Dr. W. D. Northcutt will erect two-story brick business house.

Tex., Longview.—E. A. Blount and J. C. Turner, Sr., are having plans prepared for business houses on E. Tyler Ave.

Tex., Pecos.—Pecos Land Co. reported to erect two-story store and office building.

Tex., Quanah.—B. J. Brothers will erect store corner Main and 3d Sts.; two stories; brick; 50x15 feet.

Tex., Nixon.—Promoters' Club will erect store and office building; fireproof; cost \$20,000.

Va., Norfolk.—Morewitz Bros. will erect brick store building.

Va., Richmond.—Estate of Joseph Bryan will erect store and office building. (See "Bank and Office Buildings.")

Va., Richmond.—Joseph Steinhilber will erect frame store building; cost \$8500.

W. Va., Bluefield.—L. Kaufman will erect business building.

W. Va., Bluefield.—Hutson & Eppling will award contract April 28 to remodel business building; 70x60 feet; ordinary construction; electric lighting; cement sidewalks; metal ceilings; new fronts; plate and prism glass; maple floors; cost \$3000; plans by Pedigo & Garry, Bluefield, W. Va. Address architects.

W. Va., Parsons.—Jacob Sterringer plans to erect addition to business building.

THEATERS

Ky., Paducah.—Max N. B. Nahm of Bowling Green, Ky., and J. L. Friedman and J.

W. Keller, both of Paducah, will erect Arcade Theater; frontage 45 feet; arcade leading back to theater, which will be in rear of building.

Md., Baltimore.—Pearce & Scheck, 415 E. Baltimore St., will erect air dome at Roland and Third Aves., Hampden; site 45x106 feet; at close of summer will replace with \$50,000 theater to seat 1500, including balcony.

Mo., St. Louis.—Empress Amusement Co. will open bids about May 10 to erect theater; 70x152 feet; fireproof construction; direct and indirect steam heat; concrete sidewalks; plans by John R. Dwyer, 601 Chemical Bldg., St. Louis. Address proposals to architect. (Recently noted.)

Tex., Mexia.—Charles Watson, W. L. Murphy and others are interested in organization of company to erect new or remodel old building as theater; 55x115 feet; cost \$15,000 to \$30,000.

Tex., Snyder.—Dr. A. O. Scarborough plans to erect brick opera-house; will also convert three-story sanitarium into hotel and erect two-story annex; cost \$100,000.

Va., Norfolk.—Concord Realty Co., H. C. Hofheimer, president, will erect Victoria Theater on Granby St.; 60x175 feet; seating capacity 1400; will be leased by Dr. S. Galeski.

WAREHOUSES

D. C., Washington.—Cuno H. Rudolph, John A. Johnston and Wm. V. Judson, Commissioners, D. C., will receive bids until April 28 for extension of cement warehouse at 14th and D Sts. S. W.; cost \$10,000; blank form of proposals, plans, specifications, etc., at office of chief clerk of Engineer Department, Room 427 District Bldg.

BUILDING CONTRACTS AWARDED

ASSOCIATION AND FRATERNAL

Mo., Sedalia.—Young Men's Christian Association awarded contract to T. W. Johnson of Sedalia to erect proposed Young Men's Christian Association building; 110x48 feet; three stories and basement; ordinary construction; cost \$30,000.

Tex., Timpson.—Hines, Lewis & Anderson of Garrison, Tex., have contract to erect Masonic Temple; 30x75 feet; ordinary brick construction; cost \$3500; plans by Victoria Lumber Co. of Shreveport, La.

BANK AND OFFICE

D. C., Washington.—Arlington Fire Insurance Co. awarded contract to William P. Lipscomb & Co., 1405 F St. N. W., Washington, to erect bank and office building; four stories and basement; fireproof construction; hot-water heat; electric lighting; cost \$24,000; plans recently noted prepared by J. H. Ge Shour, Hibbs Bldg., Washington.

Fla., Palmetto.—Palmetto Banking Co., T. E. Culbreath, president, awarded contract to G. R. Bond, Atlanta, Ga., to erect bank building; three stories; 24x52 feet; brick with marble front; fireproof construction; electric lighting; cost \$7500. (Recently noted.)

La., New Orleans.—Mergenthaler Linotype Co., main office, New York City, awarded contract to Murphy & Mitchell, New Orleans, to erect building; five stories and basement; 40x130 feet; fireproof; reinforced concrete; pile foundation; exterior of pressed brick; terra-cotta and polychromatic fayences; cost about \$55,000; plans by Dilloll, Owen & Goldstein, 702 Perrin Bldg., New Orleans. (Recently noted to erect this structure.)

Miss., Jackson.—First National Bank awarded contract to E. G. Parish & Co., Jackson, to erect bank building; two stories; stone; safety deposit and book vaults; Bowling Green limestone.

Okla., Milburn.—First State Bank awarded contract to erect two-story brick bank building.

S. C., Aiken.—Farmers & Merchants' Bank awarded contract to J. H. Hines of Aiken to improve building; ordinary construction; electric lighting; concrete sidewalks; cost \$10,000; plans by L. F. Goodrich.

Tex., Buffalo.—Barney Pearlstone and others awarded contract to W. J. Crawford, Palestine, Tex., to erect bank and lodge building; to be occupied by Farmers' State Bank and Knights of Pythias; 27x100 feet; brick; cost \$6000. (Recently noted.)

Tex., Brownsville.—Jose and Manuel Bestelro awarded contract to C. F. L. Bock, Brownsville, to erect three-story office and store building. (See "Stores.")

CHURCHES

Ga., Moultrie.—Presbyterian church, C. W. Piddock, member of building committee,

Fla., Ocala.—Smith & Roberts will erect warehouse; two stories; iron; construction begun.

Ga., Augusta.—Georgia Cotton Oil Co. will erect \$10,000 warehouse.

La., New Orleans.—National Rice Milling Co. will erect four-story brick building; cost \$43,000.

Mo., St. Louis.—Barnes Hospital Association will erect five-story warehouse; cost \$110,000.

N. C., Hendersonville.—Ribly-Morrow Company will erect additional warehouse. (See "Miscellaneous Enterprises.")

Tenn., Memphis.—Taylor Paper Co. is having plans prepared by Jones & Furbringer, Memphis, for warehouse; 65x160 feet; mill construction; automatic sprinkler system; hot-air heat; cost \$45,000. (Recently noted.)

Tenn., Memphis.—Cherokee Commission Co. will erect warehouse and elevator. See "Miscellaneous Enterprises.")

Tex., Dallas.—William Doran has plans by H. A. Overbeck of Dallas for warehouse to be occupied by Texas Seed & Floral Co.; 100x150 feet; reinforced concrete construction; natural gas heat; electric lighting; cost \$65,000; construction (begun) on percentage basis. (Recently noted.)

Tex., Dallas.—William Doran will erect warehouse at 209-11-13-15 Hawkins St.; three stories; concrete; fireproof; cost \$40,000.

Tex., San Angelo.—C. W. Hobbs is having plans prepared for concrete warehouse; cost \$10,000. (Previously noted.)

Va., Norfolk.—J. R. Saunders will erect brick warehouse.

awarded contract to Knight & Kelly of Atlanta, Ga., to erect edifice and Sunday-school addition; cost \$17,000 to \$18,000; plans by Charles Choate Candler, Atlanta, Ga. (Recently noted.)

Tex., Dallas.—First Presbyterian Church, Rev. W. M. Anderson, pastor, awarded contract to Alex. Watson Construction Co., Dallas, to erect proposed edifice; cost \$130,000; plans by C. D. Hill & Co., Dallas. (Lately noted.)

Tex., San Angelo.—First Christian Church awarded contract to Hanshaw & Dalton, San Angelo, to erect proposed edifice; cost \$30,000; will install pipe organ at cost of \$3500.

CITY AND COUNTY

Tenn., Benton.—Jail.—Polk County Commissioners, J. H. Williamson, chairman, awarded contract to Pauly Jail Building Co., St. Louis, Mo., at \$7350 to erect addition to county jail. (Recently noted.)

COURTHOUSES

Ala., Fayette.—Fayette County Commissioners awarded contract to Little & Cacklen, Anniston, Ala., to erect courthouse; 110x120 feet; fireproof construction; natural-gas heating; gas lighting; cost \$60,000. (Recently noted.)

Ala., Geneva.—Geneva County Commissioners awarded contract at \$27,775.75 to P. M. Metcalf, Hartford, Ala., to erect proposed courthouse to replace burned structure; plans by Benj. B. Smith of Montgomery, Ala. (Previously reported burned.)

W. Va., Moorefield.—Board of Hardy County Commissioners awarded contract through architects, Milburn, Helster & Co., Home Life Bldg., Washington, D. C., to King Lumber Co., Charlottesville, Va., at \$32,700 to erect courthouse; material furnished by county. (Recently noted to receive bids until April 20.)

DWELLINGS

Ala., Cullman.—J. R. Roen has plans by and awarded contract to W. A. Schlosser, Cullman, to erect dwelling; cost \$3000.

Ala., Gadsden.—S. H. Silbert has plans by and awarded contract to M. J. Lloyd of Gadsden to erect six-room residence; ordinary construction; cost \$4000. (Recently noted.)

Ala., Troy.—J. Tom Walters awarded contract to Mr. Paul, Troy, to erect two-story residence.

D. C., Washington.—W. J. Wire, 3122 N St. N. W., awarded contract to D. J. Swab, 426 Rittenhouse St., Washington, to erect two-story brick and frame dwelling at 3249 Potomac Ave. N. W.; 30x31 feet; hot-water heat; electric lighting; plans by owner; cost \$3000.

D. C., Washington.—Chief Justice Charles

E. Hughes awarded contract to John H. Nolan, 1413 G St. N. W., Washington, to erect dwelling; 30x85 feet; mill construction; steam heat; electric lighting; cost \$35,000; plans by George Oakley Totten, Jr., 808 17th St., Washington. (Previously noted.)

D. C., Washington.—Laura L. Paul awarded contract to Sloan Construction Co., Washington, to erect two two-story brick dwellings at 142-144 Kentucky Ave.; cost \$6900; plans by George S. Cooper, 1413 G St. N. W., Washington.

D. C., Washington.—John M. Henderson, 1418 F St. N. W., awarded contract to Joseph F. Mills, 904 Shepherd St. N. W., Washington, to erect two-story frame dwelling at 3815 Ingomar St. N. W.; cost \$12,000; plans by George P. Hales, 1939 17th St. N. W., Washington.

D. C., Washington.—Francis Ebert awarded contract to August Getz, 203 Stewart Bldg., to erect dwelling at 501 14th St. N. W.; two stories; brick; cost \$3250.

D. C., Washington.—Charles Boyd, 1215 F St. N. E., has plans by O. R. Walton to erect four dwellings at 1113-1118 Spring St.; two stories; brick; cost \$12,000; construction by owner.

Fla., Tampa.—B. C. Bonfoey awarded contract to erect residence; two stories; seven rooms; cost \$4000.

Ga., Atlanta.—C. Shelverton, 1330 Fourth National Bank Bldg., has contract to erect two eight-room dwellings on Waverly Way; cost \$4200 each.

Ga., Atlanta.—C. Shelverton, 1330 Fourth National Bank Bldg., has contract to erect two eight-room dwellings on Virginia Ave.; cost \$6200 and \$7000, respectively.

Ga., Atlanta.—R. A. Ryder awarded contract to C. Shelverton, 1330 Fourth National Bank Bldg., Atlanta, to erect eight-room dwelling; 30x45 feet; mill construction; hot-air heat; gas and electric lighting; tile walks; cost \$5000. (Recently noted.)

Ga., Wrightsville.—E. A. W. Johnson has plans by and awarded contract to W. C. Chester, Wrightsville, to erect 10-room dwelling; mill construction; cost \$5000. (Recently noted.)

Md., Baltimore.—W. L. Westphal, 1700 N. Bond St., has plans by and awarded contract to S. A. Besteremann, 36 N. Potomac St., Baltimore, to erect about 50 dwellings; 14x45 feet; ordinary construction; stoves and furnaces; gas lighting; cement sidewalks; cost \$1200 each. (Recently noted.)

Md., Ruxton.—F. L. Carter awarded contract to John F. Kunkel, 413 King St., Baltimore, Md., to erect cottage; two and a half stories; frame; plans by Gildden & Friz, Glenn Bldg., Baltimore, Md. (Recently noted.)

Md., Baltimore.—Young O. Wilson awarded contract to Provident Realty Corporation, Garrison and Piedmont Aves., Baltimore, to erect dwelling; 26x33 feet; mill construction; steam heat; electric lighting; cost \$4500; plans by Henry Tinley, 314 N. Charles St., Baltimore. (Recently noted.)

N. C., Charlotte.—Carolina Realty Co. awarded contract to J. E. Solomon, Charlotte, to erect two bungalows.

N. C., Charlotte.—McClung Realty Co. awarded contract to erect two bungalows.

N. C., Maxton.—Methodist Episcopal Church South awarded contract to Maness & Evans, Maxton, to erect parsonage; seven rooms; ordinary construction; grates; concrete sidewalks; cost \$2700; plans by J. C. Parrish. (Recently noted.)

N. C., Salisbury.—C. F. Reams awarded contract to H. F. Starr, Salisbury, to erect residence and outbuildings.

N. C., Salisbury.—Southern Railway Co. awarded contract to Porter & Boyd, Charlotte, N. C., to erect 12 dwellings along railroad between Salisbury and Greensboro, N. C., for section foremen and helpers.

Tenn., Chattanooga.—J. G. Barnwell and Clarence T. Jones awarded contract to Meers & Dayton to erect dwelling in Ferger Pl.; two stories; eight rooms; brick; tile ceilings; gas and electric lighting; cost \$6000.

Tenn., Lookout Mountain.—John Keller awarded contract, through Huntington & Sears, architects, James Bldg., Chattanooga, Tenn., to G. W. Cobb, 411 S. Highland Park Ave., Chattanooga, to erect dwelling; seven rooms; one and one-half stories; frame; shingle roof.

Tenn., Nashville.—Foster L. Wiles awarded contract to erect \$5000 residence.

Tex., Dallas.—J. P. Greaber awarded contract to W. E. Thomas, Dallas, to erect residence; brick veneer; cost \$3500.

Tex., Houston.—George Brown, Jr., has plans by and awarded contract to The Russell Brown Company, 1216 Carter Bldg.,

Houston, to erect one-story bungalow; cost \$4500. (Recently noted.)

Tex., Houston.—H. G. Frost awarded contract to erect two-story eight-room residence; hardwood finish.

Tex., Houston.—E. G. Pike, 605 Paul Bldg., awarded contract to J. P. Friesling to erect dwelling; six rooms; mill construction; cost \$3500. (Recently noted.)

Va., Fredericksburg.—Geo. A. Scott awarded contract to E. G. Hefflin, Fredericksburg, to erect residence; eight rooms.

Va., Norfolk.—Dr. W. Tilden Smith has plans by and awarded contract to B. L. Nichols, 34th St., Norfolk, to erect dwelling; 36x55 feet; brick and shingle; hot-water heat; gas and electric lighting; asphalt sidewalks; cost \$6400. (Recently noted.)

Va., Richmond.—M. E. Johns, 507 34th St., awarded contract to J. H. Moran, 302 N. 35th St., Richmond, to erect dwelling recently noted; two stories; ordinary construction; brick; gas or electric lighting; granolithic sidewalks; cost \$5000; plans by Childrey & Sunday, 919½ E. Main St., Richmond. (See "Machinery Wanted.")

Va., Roanoke.—S. B. Pace awarded contract to J. B. Riley, Roanoke, to erect \$6000 dwelling; 40x45 feet; mill construction; pressed brick, cased; heating plant to cost \$600; plans by H. M. Miller, Roanoke. (Recently noted.)

Va., Surry County.—B. C. Berryman awarded contract to W. H. Stroud of Stroud & Hook, Norfolk, Va., to erect dwelling at Mt. Ivey (not a postoffice).

HOTELS

Ark., Monticello.—Allen Hotel Co. awarded contract to Mr. Dunnington of Pine Bluff, Ark., to erect three-story hotel; St. Louis hydraulic brick; cost \$29,990.

Mo., Kansas City.—J. H. Van Closter awarded contracts to erect hotel; four stories; 40x164 feet; fireproof construction; passenger and freight elevators; cost \$40,000; plans by L. J. Middaugh, 511 Kansas City Life Bldg., Kansas City. (Recently noted.)

Okla., Hugo.—Hugo Building & Development Co. awarded contract to erect four-story hotel; cost \$50,000.

Tex., Buffalo.—W. T. Lyon awarded contract to John Rubb & Son, Hearne, Tex., to erect hotel; two stories; 34x50 feet; kitchen, 16x16 feet; brick walls; metal roof; cost \$4000; Mr. Lyon recently noted as having contract. (See "Machinery Wanted.")

MISCELLANEOUS

Ala., Cullman.—Sales Stable.—E. C. Kinney will erect sales stable; 75x150 feet; ordinary construction; iron roof; electric lighting; cost \$6000; plans and construction by W. A. Schlosser of Cullman.

Ala., Cullman.—Barn.—McEntire Mercantile Co. has plans by and awarded contract to W. A. Schlosser, Cullman, to erect stock barn; 45x110 feet; two stories; cost \$4000.

Ala., Cullman.—Barn.—E. C. Kinney has plans by and awarded contract to W. A. Schlosser, Cullman, to erect stock barn; 72x140 feet; cost \$4300.

Miss., McComb City.—Hospital.—McComb Hospital Association awarded contract to erect sanitarium; O. B. Quinn, president.

RAILWAY STATIONS

Okla., Chickasha.—Chicago, Rock Island & Pacific Railway Co., J. B. Berry, chief engineer, Chicago, Ill., awarded contract to A. W. Lane, Chicago, Ill., to erect proposed passenger station; one and two stories; 32x200 feet; brick and plaster; cost \$35,000.

SCHOOLS

Ark., Rogers.—City awarded contract at \$32,500 to J. A. Fraser, Rogers to erect high-school building; brick and stone. (Recently noted to erect this structure.)

Ga., Atlanta.—City awarded contract to George A. Clayton of Atlanta to erect proposed school building; 11 rooms; mill construction; steam heat; electric lighting; cost \$40,000; plans by King & Walker of Atlanta.

Ky., Lagrange.—Lagrange Graded and County High School Trustees awarded contract to erect school; frontage 125 feet; cost \$24,000.

La., Forest Hill.—Parish School Board awarded contract at \$14,450 to Caldwell Bros., Abbeville, La., to erect brick school; steam heat; two stories; 100x120 feet; 40 recitation rooms. (Recently noted to receive bids until April 17.)

La., Sulphur.—Calcasieu Parish School Board awarded contract to Dever & Robinson, to erect proposed school; 80x90 feet; two stories; Dianna pressed brick; white

limestone trimmings; eight classrooms about 25x35 feet; auditorium 45½x63½ feet, with stage 19x30 feet and dome-shaped roof; annex adjoining; cost \$23,397.

Mo., Kansas City.—City awarded contract at \$49,442 to L. Crosby & Son, Kansas City, to erect Sanford B. Ladd school.

Mo., St. Louis.—City awarded contracts to erect Benton School and addition to Shubbs School. Address Commissioner of School Buildings. (See Buildings Proposed, "Schools.")

N. C., Charlotte.—Biddle University will expend \$15,000 to erect Carnegie library; 60x60 feet; ordinary construction; plans by Hunter & Gordon, Charlotte; contract recently noted awarded to R. N. Hunter Company, Charlotte.

Okla., El Reno.—Board of Education awarded contract to erect high school building; cost \$70,000.

Tex., Abbott.—City awarded contract to Walter Martin, West, Tex., to erect school building; two stories; 50x80 feet; concrete and brick; cost \$10,500; construction begun. (Recently noted.)

Tex., Forrester.—City awarded contract to E. S. Boze to erect proposed school; two stories; brick; cost \$11,000.

Tex., Harlingen.—School Board awarded contract to A. Goldammer, Brownsville, Tex., to erect high school building to cost \$21,000, and to R. H. Tadlock, Gonzales, Tex., to erect Mexican school to cost \$7000. (Recently mentioned.)

Tex., Harlingen.—School Board awarded contract to A. Goldammer, Harlingen, to erect high school building, and to R. H. Tadlock, Harlingen, to erect Mexican school; cost \$21,000 and \$7000, respectively. (Previously noted to receive bids until April 15.)

Tex., Pecos.—Board of School Trustees of Reeves county awarded contract to Kelly Bros., El Paso, Tex., at \$21,756.89 to erect proposed high-school building.

STORES

Ala., Cullman.—G. S. Leeth has plans by and awarded contract to W. A. Schlosser, Cullman, to erect brick store building; 50x100 feet; cost \$5000. (Recently noted.)

Ala., Cullman.—E. E. Matthews has plans by and awarded contract to W. A. Schlosser, Cullman, to erect three brick stores; one story; 23x70 feet; cost \$8000.

Ala., Cullman.—Oscar Fischer has plans by and awarded contract to W. A. Schlosser, Cullman, to erect brick store; two stories; 30x82 feet; cost \$5600.

Ala., Hartselle.—Echols Bros. have plans by and awarded contract to W. A. Schlosser, Cullman, to erect two brick stores; 25x30 feet.

Ala., Mobile.—Moise De Leon has contract to erect buildings at Mitchell St. and Trinity Ave.; three stories and basement; mill construction; sprinkler system; cost \$30,000.

D. C., Washington.—Edson Bradley, 1328 Connecticut Ave., has plans by and awarded contract to Howard Greenley, Washington, to repair building at 1316 Connecticut Ave. N. W.; cost \$50,000.

D. C., Washington.—Caroline Appich, 911 E. Capitol St., awarded contract to Page Construction Co., Hibbs Bldg., Washington, to repair building at 312 Pennsylvania Ave.; cost \$6000; plans by Swift & Co., Washington.

Fla., Palatka.—F. C. Cochran will erect brick store building; two stories; 30½x45½ feet; brick; stoves; electric lighting; cost \$3000; contract awarded to John Dallow.

Fla., Jacksonville.—William B. Young has plans by and awarded contract to Burwell & Hillyer, Jacksonville, to erect additional story to mercantile building; 57x40 feet; ordinary brick construction; electric lighting; hand power freight elevator; cost \$3100. (Recently noted.)

Ga., Atlanta.—Jacob Spielberger awarded contract to erect business building at 330 Georgia Ave.; two stories; brick; cost \$4300.

Ga., Lafayette.—Bank of Lafayette awarded contract to F. L. McGinnis of Rome to erect store building; 30x55 feet.

Ga., Rome.—L. G. Shropshire awarded contract to McGinnis & Shropshire of Rome to erect business building; to contain two store-rooms, 22x50 feet and 19x22 feet; brick.

Ga., Unadilla.—M. H. Leggett awarded contracts to W. M. Shilven and D. L. Ivey to erect mercantile building; 75x75 feet; ordinary construction; acetylene gas lighting; cost \$4000; materials purchased. (Recently noted.)

Ga., Vienna.—Howell & Gregory awarded contract to Mr. Young of Vienna to erect store and livery stable; 55x75 feet; fireproof and ordinary construction; electric lighting; cost \$3500 to \$4000. (Recently noted.)

Ky., Middlesboro.—R. M. Rogan awarded contract to A. G. Gallion Construction Co. of Knoxville, Tenn., to erect store; two stories; brick; cost \$7000; plans by Baumann Bros., Knoxville, Tenn. (Lately noted.)

Miss., Jackson.—Jackson Hardware Co. awarded contract to A. L. Dixon at \$9625 to erect store building; two stories; 43x160 feet; plans by J. H. Myers, Jackson.

N. C., Charlotte.—Southern Real Estate, Loan & Trust Co. awarded contract to Mr. Oates, Charlotte, to erect store building and additional story and remodel front of structure adjoining.

Okla., Milburn.—Herd-Farnham Company awarded contract to erect business building.

Okla., Milburn.—F. L. Hunnicutt awarded contract to erect business building.

Okla., Milburn.—S. J. Powell awarded contract to erect business building.

Okla., Vian.—I. Nakdimen and others awarded contract to O. M. Andrews of Vian to erect mercantile building; 140x100 feet; ordinary construction; concrete floors; metal roof; cost \$11,000; plans by A. Klingensmith, Fort Smith, Ark. (Recently noted under "Miscellaneous Structures.")

S. C., Columbia.—S. E. Powell awarded contract to W. E. Carter, 1306 Hiedt St., Columbia, to erect store building; 27x80 feet; brick walls; steel front; plate-glass windows; wood flooring; electric lighting; cost \$4000; plans by owner and R. L. Granby, 1319 Hiedt St., Columbia. (Recently noted.)

Tex., Brownsville.—Jose and Manuel Bestero awarded contract to C. F. L. Bock, Brownsville, to erect store and office building; 190x50 feet; three stories; electric lighting; cement sidewalks; cost \$18,000; plans by M. E. Tracy of Brownsville. (Recently noted.)

Tex., Dallas.—J. O. McReynolds, Dero Seay

and Harry Seay awarded contract to H. M. Barkebaugh, Dallas, to erect two additional stories to building and remodel interior; cost \$20,000; plans by C. D. Hill & Co., Dallas.

Tex., Dallas.—L. R. Wright and associate awarded contract to erect three-story-and-lowerment brick building; plans by Lang & Wittich, Dallas.

Tex., Dallas.—Seay, Robinson & Cranfill awarded contract to A. Glinco, Dallas, to erect business building; two stories; brick; 50x90 feet; cost \$8200.

Tex., Hillsboro.—William and T. B. Bland awarded contract to erect five brick business buildings; cost \$12,485.

Tex., Texas City.—Livingstone & Ellis awarded contract to M. C. Bowden, Galveston, Tex., to erect business building; 125x110 feet; 13-inch brick walls; cost \$22,000; plans by A. L. Etie, Texas City. (Recently noted.)

Va., Norfolk.—S. J. Sugar awarded contract to J. C. Johnson & Bros. for erection of four stores corner Liberty St. and Oberndorfer Rd.; one story; brick; cost \$4000.

THEATERS

Ga., Lafayette.—Bank of Lafayette awarded contract to F. L. McGinnis of Rome to erect moving picture theater; 40x65 feet.

Tex., Abilene.—Reisel & Powell have contract to erect Dixie Theater on 2d St.

WAREHOUSES

Mo., St. Louis.—Beck & Corbett Iron Co. will erect addition to warehouse; two stories, making, when completed, seven-story structure; 68x126 feet; mill construction; steam heat; electric elevator; cost \$41,410; plans by Klipstein & Rathman, Chemical Bldg., St. Louis; contract awarded to E. Ward of St. Louis. (Previously reported.)

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Greenwood.—The Missouri Pacific Railway, it is reported, will build a connection from Womble to Greenwood, making a route via Camden and Alexandria to New Orleans. E. F. Mitchell is engineer of construction at St. Louis, Mo.

Fla., Ocala.—An officer of the Tampa & Jacksonville Railway confirms report that the company proposes to build from Fairfield to Ocala, 21 miles. F. J. Lisman of New York is president and A. L. Glass of Gainesville, Fla., is general manager.

Ga., Barnesville.—Ten residents of Barnesville are reported to have applied for a charter to build a railroad from Barnesville to connect at Piedmont with the Southern Railway. The Mayor of Barnesville may be able to give information.

Ga., Cairo.—The Pelham & Havana Railroad, says a dispatch, is proposing to build an extension. A. C. Felton, Jr., is president at Macon, Ga.

Ga., Fitzgerald.—President J. A. J. Henderson of the Ocala Southern Railroad is reported saying that it is contemplated to extend north to either Hawkinsville, about 40 miles, or Perry, about 55 miles, but nothing has been decided. Address Ocala, Ga.

Ga., Hawkinsville.—A dispatch announces the beginning of tracklaying on the Hawkinsville & Western Railway, materials being on hand for more than two miles of line. Road will go to Perry and Fort Valley, Ga. T. B. Ragan is president.

La., New Orleans.—The Frisco system, it is announced, has leased the Louisiana Southern Railroad and will, it is reported, spend several millions of dollars to build terminals and docks in St. Bernard parish, about 20 miles below the Chalmette terminals. M. C. Byers is chief engineer at St. Louis, Mo.

Ga., Valdosta.—Frank Roberts, president of the Valdosta, Moultrie & Western Railway, is reported saying that the backers of the road intend to build an air line connecting Jacksonville and Montgomery via Valdosta as soon as possible. Nearly 80 miles of grade south of Valdosta has been built, and work is being pushed and survey has begun for the line to Montgomery. Address Valdosta, Ga.

Ga., Moultrie.—It is contemplated to build a railroad from Moultrie to Hartsfield, Ga., and President W. C. Vereen of the Chamber of Commerce was authorized to appoint a committee to secure subscriptions. The Georgia Northern Railway may build the road. C. W. Pidecock is president at Moultrie, Ga.

Ky., Hickman.—The Chicago, Memphis & Gulf Railroad Co. has filed amended articles

of incorporation for an extension from Hickman to Paducah, Ky., traversing Fulton, Hickman, Carlisle, Ballard and McCracken counties. S. G. Lattn is president and general manager at Dyersburg, Tenn.

Ky., Cynthiana.—The Louisville & Nashville Railroad is reported obtaining rights of way for building second track in the vicinity of Cynthiana, being part of an extensive plan for similar work. W. H. Courtenay is chief engineer at Louisville, Ky.

Ky., Jackson.—The Lexington & Eastern Railway, it is reported, has let contract to C. J. McKinney of Knoxville, Tenn., to construct eight miles of its extension eastward from Jackson.

Ky., Mount Sterling.—O. G. Wales, Toledo, O., says it is not yet decided to which point the Mount Sterling Short Line will be built. Rumor says to either Paris, Carlisle or Cynthiana, Ky.

La., Ringgold.—The Louisiana & Arkansas Railway, says a report, contemplates building an extension of four miles from Jamestown to Ringgold. W. H. Vance is engineer at Stamps, Ark.

La., Ringgold.—The Globe Lumber Co., it is reported, has made survey for a branch railroad from Ringgold to Lake Blumstein, nine miles.

La., New Iberia.—F. W. Crosby of New Orleans, president of the Southwestern Traction Co., which proposes to build an electric railway system, with New Iberia as the center, has applied for a franchise.

Md., Towson.—The J. H. Harlow Contracting Co. will, it is reported, begin work immediately clearing right of way for the proposed Towson & Cockeysville Electric Railway, surveys being nearly complete. James S. Nusser is secretary and treasurer at Lutherville, Md. J. Alexis Shriver of Belair, Md., is president.

Miss., Houston.—Application is reported made to charter a railroad from Houston in Chickasaw county to West Point, Miss., in Clay county. The Mayor may be able to give information.

Miss., West Point.—The West Point & Houston Railroad Co. is reported to have changed its name to the Secona Valley & Southeastern Railroad Co., and will build a line from the west bank of the Tombigbee River (connecting there with another road to be constructed) to a terminus in Calhoun county, Mississippi, about 60 miles. A. F. Fox and Moseley & Lagrone of West Point, Miss., have been mentioned in connection with this company.

Mo., Kansas City.—President H. D. Patee of the West Missouri Electric Railway Co. says that contract has been let to the Spitzcaufsky-Wagner Construction Co. for its proposed line of 34 miles from Kansas City to

Harrisonville, Mo., via Grandview, Belton and Raymore. Three bridges required of 200, 100 and 60 feet, respectively, and of steel girder and concrete. Materials desired for line. Other officers are S. P. Allen, secretary; C. C. Christie, treasurer. President Patee is also general manager. Besides the three officials here named, the directorate includes John Spitzcaufsky and Gordon A. Wagner. W. N. Nagle is chief engineer.

Mo., Rolla.—Gilbert Lay, St. Clair, Mo., president of the company, confirms report that the Missouri, Arkansas & Gulf Railroad is to be built from Rolla to Bakersfield, Mo., 125 miles, via Licking. Two wooden bridges 125 feet long near Rolla will be needed. E. E. Young of Rolla, Mo., is the contractor for the road. E. C. Comstock of Lacombe, Mo., is vice-president and W. E. Fink of Springfield, Mo., is secretary. Others interested are E. C. Halbert, Carl Kimmell, K. J. W. Cook and A. J. Frank.

N. C., Lenoir.—W. J. Grandin of Tidoute, Pa., accompanied by a civil engineer, is reported to have made an inspection of the route proposed for the Watauga Railroad, of which he is an incorporator.

S. C., Abbeville.—W. H. H. Anderson of Anderson, S. C., is reported to have made survey for the proposed electric railway from Abbeville to Antreville, 12 miles. W. N. Graydon, R. S. Link and E. C. Horton are said to be interested.

S. C., Columbia.—The Columbia & Augusta Electric Railway Co. has been authorized to change its name to the Augusta-Aiken Electric Corporation, and it is rumored that steps will be taken to build the long-contemplated line from Columbia to Aiken, connecting there with the interurban which runs to Augusta. L. C. Haynie is president and M. H. Hendee secretary and treasurer. James U. Jackson, vice-president of the Augusta and Aiken line, is also said to be interested.

S. C., Greenville.—Survey is reported begun on a belt line to be constructed by the Greenville, Spartanburg & Anderson Railway Co. in Greenville to connect various mills. It will be about a mile long. W. S. Lee is vice-president and chief engineer at Charlotte, N. C.

S. C., Greenwood.—Will H. Rush of Greenwood, it is reported, has been given a contract to grade four miles of line on the Piedmont & Northern interurban railway at Hodges, S. C.

Tenn., Harriman.—The Harriman, Knoxville & Eastern Railway will, it is reported, soon request bids for a further extension eastward, construction being now in progress on 17 miles. C. E. Hendrick of Harriman and others are interested.

Tenn., Henderson.—A committee has been appointed on subscriptions for the proposed electric railway from Henderson to the Tennessee River as follows: J. L. Jones, J. D. Anderson, William Lee and S. C. Galbraith. J. D. Johnson presided at the meeting.

Tenn., Nashville.—The Nashville-Gallatin Railway Co. has applied for charter to build an interurban line from Nashville to Gallatin, Tenn., about 30 miles; capital \$75,000; incorporators, H. H. Mayberry, John A. Pitts, R. A. Bailey, R. W. McLenore and R. A. Bailey, Jr.

Tex., Dallas.—M. M. Phinney, district manager for the Stone & Webster Engineering Corporation of Boston, is reported saying that construction will begin within 30 or 40 days upon the proposed interurban line from Dallas to Waxahatchie, about 20 miles. Mark Lowd of Houston, Tex., Southwestern manager for Stone & Webster, may supervise the work. E. T. Moore is local manager at Dallas.

Tex., Crosbyton.—The Crosbyton & South Plains Railroad, says a dispatch, will issue bonds upon completed line from Lubbock to Floydada, and will build the projected extension to Spur, Tex. P. L. Conley is president at 39th St. and Stewart Ave., Chicago, Ill.

Tex., Haskell.—M. R. Hemphill is reported to have made a proposition to build an interurban railway from Haskell to Rule, Tex., 11 miles. The route is level.

Tex., Houston.—A. Foster Irwin is quoted as saying that contract for the Houston-Lay Shore Traction Co.'s line from Houston to La Porte and Sylvan Beach, about 25 miles, will be let to the W. E. Uie Construction Co., which has been doing work in the States of Washington and Oregon. Work will begin before June 1. Swedish bankers are said to be interested.

Tex., Onalaska.—President William Carlisle of the Beaumont & Great Northern Railroad is quoted as saying that the line will be extended to Waco, Tex., about 55 miles, this year. C. J. Rogan is vice-president and general superintendent at Onalaska, Tex.

Tex., Palacios.—H. W. Dean, secretary and general manager of the Palacios, San Antonio & Pecos Valley Railroad Co., is quoted as saying that contract will be let within 30 days for 35 miles of line from Palacios to Francitar and Edna. H. L. Montandon is chief engineer. (See Manufacturers Record, September 29 and November 24, 1910.)

Tex., Quanah.—The Quanah, Acme & Pacific Railway. It is reported, will issue \$10,000 of bonds and do more construction. C. E. Ensminger is vice-president and general manager at Quanah, Tex.

Tex., Terrell.—The Manufacturers Record is informed that Terrell has a bonus of \$100,000 subscribed for a proposed railroad which has failed to materialize, and wants to divert it to another purpose, preferably for a railroad to Tyler, Tex. Address M. W. Raley, Terrell, Tex.

Va., Roanoke.—Survey for the proposed Roanoke & Mount Airy Railway is reported progressing and the engineers are about 25 miles from Roanoke, toward which they are working. W. J. Demont is chief engineer.

W. Va., Morgantown.—The Morgantown & Kingwood Railroad, it is reported, contemplates building a branch from Albrightsville to the mouth of Big Sandy Creek, about 11 miles. Survey has been made and estimates are being prepared. J. K. Monroe is chief engineer at Kingwood, W. Va.

W. Va., New Martinsville.—Magnolia district has voted by a very large majority in favor of issuing \$100,000 of bonds to aid the electric railway proposed by T. Moore Jackson of Clarksburg between New Martinsville and Middlebourne.

STREET RAILWAYS

N. C., Hendersonville.—Reported that construction will begin April 25 on the proposed

street railway from the depot to Columbia Park and Osceola Lake, one and a half miles. R. W. Thomas of Atlanta, Ga., and C. C. White of Marion, N. C., are said to be seeking the contract.

Ky., Louisville.—An ordinance has been introduced in the City Council to sell a street-railway franchise for a line on parts of Slevin and 30th Sts. and Alford Ave.

Ky., Paducah.—The proposed street railway franchise heretofore reported will be sold at auction April 26 at 10 A. M. James P. Smith is Mayor.

La., New Orleans.—The New Orleans Railway & Light Co. contemplates some extensions. Hugh McCloskey is president.

N. C., Newbern.—The Neuse-Trent Traction Co., it is reported, is preparing to build the proposed street railway. Among those mentioned as interested are Joseph Keys of Roanoke, Va.; Louis Carr of Falls Mills, Va.; James E. Walker of Herndon, W. Va., and Henry B. Stevens and John B. Anderson of Asheville, N. C.

N. C., Thomasville.—With reference to a recent report stating that the corporation had changed hands, an officer of the Thomasville Light & Power Co. says that it is not engaged in the street-railway business. Z. V. Taylor is president.

Tex., Denton.—Final contract is reported signed for the extension of the Denton Street Railway to the College of Industrial Arts, more than a mile. R. J. Wilson is manager.

Tex., McKinney.—The Texas Traction Co., of which J. F. Strickland of Dallas is president, will, it is reported, build a street railway in McKinney.

Tex., Palestine.—Thomas O'Hara and Ralph E. Hoskat of Dayton, O., have made a proposition to build a street railway in Palestine, asking a bonus of \$30,000.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Pumps.—A. G. Lordley, chief engineer State Hospital, Chattahoochee, Fla., wants air pumps, with engines, for pumping motor-car tires.

Bank Fixtures.—Georgia Loan & Investment Co., Tifton, Ga., wants prices on bank fixtures.

Boiler, etc.—Office of Commissioners of the District of Columbia, Washington. Sealed proposals will be received until 2 P. M. May 15 for making and installing boiler, painting and repairing one fire engine; specifications, form of proposal and necessary information may be obtained upon application to Property Clerk, District of Columbia, Room 329 District Bldg.; Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners, District of Columbia.

Boiler.—E. E. Segar, Urbanna, Va., wants 20 or 25-horse-power boiler (Cornish preferred).

Boilers.—Clarence Cosby, Richmond, Va., wants to correspond with manufacturers of boilers for sawmills; has view to agency.

Bone Mill.—H. P. K. Smythe, Gate City, Va., wants small mill to grind bone and shell for poultry.

Brass L's.—Office of Post Quartermaster, Fort Monroe, Va. Sealed proposals in duplicate will be received at this office until 10 A. M. May 5, and then opened, for furnishing two 90-degree L's, 1½-inch brass; three 45-degree L's, 1½-inch brass, and two unions, 1½-inch brass; proposals must be signed by bidder, enclosed in sealed envelopes, addressed to R. B. McBride, Captain and Quartermaster, United States Army, and marked "Proposals for Quartermaster's Supplies, to be opened 10 A. M. May 5."

Bridge Construction.—See "Road Construction."

Broom Machinery.—H. P. K. Smythe, Gate City, Va., wants machine to tie brooms.

Broom Machinery and Material.—H. B. Thomas, Stony Point, N. C., wants prices on machinery to manufacture house brooms; also on broom corn.

Broom Manufacturers.—C. P. Chenault, Frankfort, Ky., wants addresses of manufacturers of brooms and other articles made from broomcorn.

Building Materials.—C. D. Overmyer, Nor-

folk, Va., wants prices on metal ceiling, galvanized shingles, leaded crystal sheet glass in square lights 24x40 and 32x40.

Building Materials.—Farmers and Merchants' Bank, J. B. Hodges, cashier, Logansville, Ga., wants prices on building materials.

Building Materials, etc.—Crites Broom Co., E. J. Crites, president and manager, Lawton, Okla., wants estimates on concrete work and materials for 50x90-foot two-story building; reinforced flooring; flat roofing, laid.

Building Materials.—W. T. Lyon, Buffalo, Tex., wants prices on metal shingles, cornice, gutters and down spouts.

Building Materials.—Boylan Bros., Brooks, Ga., want building materials to construct two-story 34x55-foot store building.

Building Materials.—D. B. Barbour & Co., Norfolk, Va., will want prices on building materials.

Building Materials, etc.—Moore Construction Co., Charleston, W. Va. (prospective bidders), want sub-bids on following for Government building at Charleston (extension and remodeling of U. S. postoffice), proposals for which will be received and opened May 16: Stone work, granite and Bedford limestone, sandstone, structural and ornamental terra-cotta, structural steel, ornamental iron, the roofing, sheet-metal work, plastering, ornamental plastering, marble, terrazzo floors, mill work, finished hardware, painting and varnishing, electric wiring, plumbing, etc.

Buggy Parts.—E. L. Burruss, Emporia, Va., wants to correspond with manufacturers of buggy parts in the rough.

Canal Construction, etc.—W. H. Crocker, F. B. Sherburne and W. T. Boone, Commissioners of Calhoun County Drainage District No. 2, Port Lavaca, Tex., will receive bids until 11 A. M. April 29 for construction, excavation and building of canals, ditches, laterals, bridges and concrete work in Drainage District No. 2, according to plans and specifications on file with W. C. Best, clerk of Commissioners' Court of Calhoun county; bids to be made at price per cubic yard for excavating, moving and distributing dirt, and separate bids are to be submitted on each bridge and concrete work; certified check 5 per cent. of bid.

Canal Construction.—Drainage District No. 3 of Carroll county, Carrollton, Mo., will receive bids at public outcry on May 15 for construction of main canal and laterals; length of main canal 21 miles; 1,170,000 cubic yards excavation. Address Brooks & Jacoby, civil engineers, 515 Shubert Bldg., Kansas City, Mo., for full information.

Castings.—Hermann Ruegg, Casler No. 104, Smyrna, Turkey, wants addresses of factories handling dry and salted casings for sausage-making.

Cement.—See "Tombstones."

Coal.—Sealed proposals will be received at office of Treasurer Southern Branch N. H. D. V. S., National Soldiers' Home, Virginia, until 1.30 P. M. May 10, and there opened, for furnishing and delivering supplies in accordance with instructions and specifications, copies of which, with blank proposals, can be had upon application to treasurer, as follows: For 11,000 tons bituminous coal and 200 tons anthracite coal, for fiscal year ending June 30, 1912; John T. Hume, treasurer.

Coal Cutters.—Jewell Ridge Coal Corporation, Tazewell, Va., wants to correspond with manufacturers of coal cutters operated by gasoline engines.

Cable.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids on May 9 for furnishing 15,000 feet of oilproof cable; delivery Washington, D. C.; schedule No. 3510; for copies apply to navy pay office nearest navy-yard.

Cable.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids on May 9 for furnishing miscellaneous lot of telephone cable; delivery at navy-yard, Charleston, S. C.; schedule No. 3509; for copies apply to navy pay office nearest navy-yard.

Canal Construction.—Sealed proposals for excavation of 83 miles of drainage canals and erection of pumping plant will be received by Board of Drainage Commissioners, Matamoras Drainage District No. 1, at Court-house, Swanquarter, North Carolina, until noon Tuesday, May 16, 1911 (deferred date), and then opened and publicly read; excavation requires removal of approximately 2,700,000 cubic yards of earth excavation; installation of pumping plant requires furnishing and putting in place of suitable pumps, engines and boilers to discharge 1890 cubic feet of water per second against head of eight feet; all work to be done in accordance with specifications furnished therefore, and to be completed within two years from date of contract; separate bids will be received for the excavation and for the pumping plant; complete set of specifications, drawings and blank forms for bidders will be placed on file for inspection at following places: Office of Engineering News, New York; office of Manufacturers Record, Baltimore; office of the Contractor, Chicago; office of Southern Land Reclamation Co., 95 Milk St., Boston; office of Board of Drainage Commissioners, Swanquarter, North Carolina. A complete set of drawings and specifications can be obtained from J. O. Wright, Tallahassee, Fla., on payment of \$2; each proposal submitted must comply with all terms and conditions of specifications; usual rights reserved; Board of Drainage Commissioners, John P. Kerr, secretary, Middletown, Hyde county, North Carolina; J. O. Wright, consulting engineer, Tallahassee, Fla.

Coffee-roasting Machinery.—H. M. Nesmith, Buffalo Gap, Tex., wants to correspond with manufacturers of and dealers in machinery for coffee-roasting factory.

Coil-springs Machinery.—Birmingham Sanitary Bed & Manufacturing Co., Birmingham, Ala., wants information, catalogues and prices on machinery for making coil springs.

Coke.—See "Foundry Equipment."

Concrete Mixer.—Bromide Oolitic Stone Works, Bromide, Okla., wants second-hand mixer (Smith preferred).

Copper.—See "Hardware, etc."

Cotton Machinery.—C. P. Chenault, Frankfort, Ky., wants addresses of manufacturers of cotton-mill machinery; also address of engineer preparing plans and specifications for erection and equipment of cotton mill.

Cracker Machinery.—H. M. Nesmith, Buffalo Gap, Tex., wants to correspond with manufacturers of and dealers in machinery for cracker factory.

Desks.—See "Office Furniture, etc."

Dredging.—U. S. Engineer Office, Jacksonville, Fla. Sealed proposals for dredging in Caloosahatchee River and entrance, Florida, will be received at this office until 12 M. May 22, and then publicly opened; information on application; Geo. R. Spalding, Captain, Engineers.

Dry Goods, etc.—Nelms & Blum Company, Greenville, Miss., will want prices on dry goods, shoes and ladies' clothing.

Dustlayer, etc.—Sealed proposals, addressed to Board of Awards, will be received by City Register at his office, City Hall, Baltimore, Md., until 11 A. M. May 3 for supplying Department of Street Cleaning with preparation for laying dust and preserving macadam roads; also with use of sprinklers from date of contract to October 15; each bid accompanied by certified check of bidder for \$300, made payable to the Mayor and City Council; specifications can be obtained from office of Commissioner of Street Cleaning; J. L. Wickes, Commissioner of Street Cleaning.

Electric Switches.—See "Porcelain Boxes."

Earthwork.—U. S. Engineer Office, Vicksburg, Miss. Sealed proposals for constructing about 65,000 cubic yards of earthwork in Lower Yazoo levee district will be received at this office until 11 A. M. April 28, and then publicly opened. Information on application. J. A. Woodruff, Captain, Engineers.

Electric-light Plant, etc.—Sealed proposals will be received until 9 A. M. May 8 at office of City Clerk, Chillicothe, Mo., by City Auditor Ira T. Graham for furnishing material and constructing complete municipal electric-lighting and power plant in accordance with plans and specifications on file at office of City Clerk and at office of Fuller-Coulter Company, engineers, Chemical Bldg., St. Louis, Mo., as follows: (Section 1) Concrete work, floors, machinery and building foundations; (2) brick power-house building complete, less foundation and floor; (3) radial brick or concrete chimney; (4) steam boilers and equipment erected; (5) boiler-feed pumps, heaters, separators, traps and all pipe work erected complete; (6) two steam engines erected, 125-250 K. V. A.; (7) two generators and exciters, switchboard and regulators erected complete; (8) pole line transformers and street-lighting system; (9) 1000 feet deep well for water supply; (10) steel tower and tank, 5000 gallons capacity. Bids may be submitted on work as a whole or on sections or combinations of sections; certified check 5 per cent. amount of bid; rights reserved; for further information address engineers.

Electrical Equipment.—Farmers and Merchants' Bank, J. B. Hodges, cashier, Logansville, Ga., wants prices on electrical equipment for bank building.

Electrical Machinery.—See "Laundry Irons."

Electrical Machinery.—A. S. Halstead, 50 Church St., New York, wants 200-300-kilowatt 250-volt directed-connected unit.

Electrical Machinery.—Appalachian Training School, D. D. Dougherty, principal, Boone, N. C., wants small dynamo.

Electrical Supplies.—Office of Post Quartermaster, Fort Monroe, Va. Sealed proposals in duplicate will be received at this office until 10 A. M. May 5, and then opened, for furnishing three type E-7 Holophane reflectors, 60-W. tungsten, lot No. 32,285, page No. 254, Electric Service Supplies Co.; three form H shade holders for same; 13 type E-5 Holophane reflectors, 40-W. tungsten, list No. 32,284, page No. 254; 13 form O holders for same; 15 pendant switches, ¾-inch, with bushings; one snap-switch indication, S. P., 5 amperes; 100 feet lamp cord, No. 15, reinforced. Proposals must be signed by bidder, enclosed in sealed envelope addressed to R. B. McBride, Captain and Quartermaster of United States Army, and marked "Proposals for Quartermaster's Supplies, to be opened 10 A. M. May 5."

Elevator.—Willingham Sash & Door Co., Macon, Ga., wants prices on electric passenger elevator for three-story building.

Engine.—Walterboro Cotton Oil Co., Walterboro, S. C., wants good second-hand Corliss engine; 16x30; heavy-duty pattern; wants full description.

Engines.—Clarence Cosby, Richmond, Va., wants to correspond with manufacturers of engines for sawmills; has view to agency.

Engines.—Office of Constructing Quartermaster, Fort Caswell, N. C. Sealed proposals, signed in triplicate, will be received at this office until 3 P. M. April 27, and then publicly opened, for furnishing and delivering (not installing) in pump-house two 53-horsepower simple automatic high-speed single-valve engines, complete, with all steam and exhaust connections, with sub-base and extended shaft and outboard bearing for generators, in accordance with item 6 on pages 56 to 67, respectively, of the specifications for electric power plant machinery and electric-lighting system, prepared in office of quartermaster-general; bidding blanks and specifications, etc., furnished by this office; guaranty in amount of 10 per cent. of bid required; certified check for amount may be enclosed in lieu of other guaranty; right is reserved to reject any and all bids. Address envelope containing proposals to Constructing Quartermaster, Fort Caswell, N. C., and mark same "Proposals for Engines." R. O. Ed-

wards, First Lieutenant, Coast Artillery Corps, U. S. Army, Constructing Quartermaster.

Engine, etc.—Granbury Water, Ice, Light & Power Co., Jas. W. Hockaday, manager, Granbury, Tex., wants 100-horse-power gas producer and engine.

Engraving and Lithographing Bonds.—Bids will be received until 11 A. M. May 10 for the delivery to county of Galveston, Texas, of 600 steel-engraved or lithographed Galveston county causeway-bridge bonds; 200 of denomination of \$500, with 80 coupons each, and 400 of denomination of \$1000, with 80 coupons each; form and contents of bond, certificate of Comptroller and style of coupon can be had on application to undersigned; bidders must submit design of bond and enclose with bid certified check for \$100, payable to County Judge, and to be forfeited to county upon failure to enter into contract and give bond for faithful performance of same; bids received for either lithographing, steel engraving or both, and the court reserves usual rights; John M. Murch, County Auditor, Galveston, Tex.

Explosives, etc.—Department of Interior, United States Reclamation Service, Washington, D. C. Sealed proposals will be received at office of United States Reclamation Service, 777 Federal Bldg., Chicago, Ill., until 2 P. M. May 5 for furnishing explosives and blasting supplies for two years from May 15; for particulars address United States Reclamation Service, Washington, D. C., or 777 Federal Bldg., Chicago, Ill.; F. H. Newell, director.

Fancy Goods.—Chaitram Khullar & Co., importers and merchants, Amritsar, India, are interested in prices on fancy goods; also soaps, toys and glassware. (See "Soaps," "Toys" and "Glassware.")

Flour Mills.—Panna Lall Dutt & Co., No. 68 Sitaram Ghose St., Calcutta, India, want to correspond with manufacturers of small wheat mills for daily family use; view to agency; want sample, with price based on terms c. i. f. c. Calcutta.

Foundry Equipment.—Roush-White Foundry & Machine Co., H. F. Roush, president, F. Walnut St., Hillsboro, O. (Stuttgart, Ark., after June 1), wants prices on following: Lathe 26"x8" or 10"; lathe 18"x4" or 6"; 24 to 30" planer; 20 to 24" shaper; drill press 24 to 26"; sliding head; power hack saw; emery stands, bench and pipe; vices and small tools; taps, dies, reamers, etc.; one each 10 and 4 horse-power motors, 220 D. C.; iron cupola, 3 tons per hour; brass furnace to take 100-pound crucibles; 12 sets snap flasks; carload floor flasks; tumbler; fan for iron and brass furnaces; also pig-iron, molding sand, coke and general foundry equipment for plant to be established at Stuttgart.

Foundries.—See "Plow Manufacturers."

Foundry Equipment.—See "Machine Tools, etc."

Furniture Manufacturers.—American Wardrobe Co., H. B. Williams, president, Washington, N. C., wants to correspond with wood-working companies, with view to placing orders for manufacture of bed wardrobes.

Gas Plant.—J. A. Walker, 4210 Lafayette St., Dallas, Tex., wants prospective plans, specifications and construction bids on complete gas plant proposed at Temple, Tex.; 100,000 cubic feet capacity; 50,000-foot holder; five miles main, 8, 6, 4, 2-inch.

Gas Producer, etc.—Granbury Water, Ice, Light & Power Co., James W. Hockaday, manager, Granbury, Tex., wants 100-horse-power gas producer and engine.

Gasoline Engine.—J. E. Pierce, Blessing, Tex., wants prices on 50 or 60-horse-power gasoline engine.

Gasoline Engines.—Clarence Cosby, Richmond, Va., wants to correspond with manufacturers of gasoline engines; has view to agency.

Gasoline Machinery, etc.—J. L. Gilton, 10 and 11 Phillips block, Winchester, Tenn., wants information on manufacture of gasoline from natural gas and prices on machinery.

Glass Doors.—M. E. Johns, 507 34th St., Richmond, Va., wants prices on two bevel plate glass front doors.

Glassware.—Chaitram Khullar & Co., importers and merchants, Amritsar, India, are interested in prices on "glass-made things."

Grading.—Bids will be received until noon April 29 for grading public road from point in State road near Picketts schoolhouse to Swannanoa River near Farm House, and to connect with B Fortune Rd.; bids to be submitted by cubic yard for earth removed; particulars can be obtained from office of County Road Engineer, J. C. M. Valentine, Courthouse; W. E. Patton, County Commissioner, Asheville, N. C.

Grading.—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. May 1 for grading 17th, 18th, 19th, 20th, 21st, 14th, 15th, 16th, 13th, 12th and 11th Sts.; Bath, Jordan and Kelham Aves.; plans and specifications on file with City Clerk; certified check 3 per cent. of bid.

Grading.—Bids are invited for clearing, grubbing and grading three miles of streets in Houston Harbor Addition; plans and specifications on file with Tolman Engineering Co., 403 First National Bank, Houston, Tex. Grinding Machinery.—See "Bone Mill."

Grinding Machinery.—See "Flour Mills."

Grinding Machinery.—Gilkey Veneer Co., Marion, N. C., wants to correspond with manufacturers of machinery for grinding wood into powder.

Grinding Machinery.—M. H. Edwards, Box 537, Abbeville, La., wants prices on small crusher to grind bones for fertilizing.

Handle Machinery.—See "Woodworking Machinery."

Hardware, etc.—Proposals will be received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. May 2, and publicly opened immediately thereafter, to furnish at Naval Academy, Annapolis, Md., a quantity of yellow pine, hardware and sheet copper. Applications for proposals should refer to Schedule 3491. Blank proposals will be furnished upon application to the Navy pay office, Baltimore, Md., or to the bureau; T. J. Cowle, Paymaster-General, U. S. N.

Hardware.—See "Building Materials, etc."

Hat Pin Manufacturers.—A. M. Mandel, Room 306, 66 Beaver St., New York, wants to correspond with view to placing order for manufacture of hat pins.

Holst.—Bromide Oilstone Stone Works, Bromide, Okla., wants two-drum holst, about 20 horse-power (American preferred).

Ice Machinery.—Sealed proposals endorsed "Proposals for Ice-making and Refrigerating Machinery" will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. May 6, and then and there publicly opened, for ice-making and refrigerating machinery at U. S. Marine Corps rifle range, Winthrop, Md. Specifications can be obtained on application to bureau. R. C. Hollyday, chief of bureau.

Iron.—See "Foundry Equipment."

Jetty Work.—U. S. Engineer Office, 920 17th St. N. W., Washington, D. C. Sealed proposals for constructing and revetting jetties and driving marking piles in James River, Va., will be received at this office until 12 M. May 20, and then publicly opened; information on application at U. S. Engineer Office, 28 N. 9th St., Richmond, Va.; W. C. Langhitt, Lieutenant-Colonel, Engineers.

Knitting Machinery.—H. M. Nesmith, Buffalo Gap, Tex., wants to correspond with manufacturers of and dealers in machinery for knitting factory.

Laundry Irons.—The Initial Co., Wytheville, Va., wants addresses of manufacturers of electrically-heated laundry roller irons (or burnishing irons).

Levee Work.—75,000 yards of levee work to let, five to seven-foot filling, six to eight-foot berm-borrow both sides; no shrinkage; mostly through fields; apply on works; McSweeney Bros., Italy, Tex.

Locomotive.—West Missouri Electric Railway Co., H. D. Patee, Kansas City, Mo., wants prices on electric locomotive.

Lock and Dam.—U. S. Engineer Office, Wheeling, W. Va. Sealed proposals for constructing lock and dam No. 20, Ohio River, near Belleville, W. Va., will be received at this office until 11 A. M. May 17, and then publicly opened; information on application; F. W. Altstaetter, Major, Engineers.

Lumber.—See "Hardware, etc."

Machine Tools, etc.—Bartlesville Machine Co., H. G. Durnell, manager, Bartlesville, Okla., wants prices on 26-inch by 16-foot lathe, 35-inch by 20-foot lathe, and 72-inch vertical boring mill, all motor-driven; shaper; also information on "system for costs and foundry records."

Marine Engine.—A. G. Lordley, chief engineer State Hospital, Chattahoochee, Fla., wants six-horse-power second-hand marine gasoline engine with shaft and wheel.

Mantels.—M. E. Johns, 507 34th St., Richmond, Va., wants prices on four cabinet and four slate mantels.

Match Machinery.—H. M. Nesmith, Buffalo Gap, Tex., wants to correspond with manufacturers of and dealers in machinery for watch factory.

Mining Machinery.—G. B. Robertson, Danville, Va., contemplates purchasing mica mining machinery.

Mining Machinery.—See "Coal Cutters."

Motors.—See "Foundry Equipment."

Motor Cars.—Wm. E. Hawkins, Brownsville, Tex., wants to correspond with manufacturers of motor cars for interurban and street railway use.

Name-tabs Machine.—Panna Lall Dutt & Co., No. 68 Sitaram Ghose St., Calcutta, India, want information, with prices and discounts, on machinery for name tabs for tailors' use; view to agency.

Novelty Manufacturers.—See "Hatpin Manufacturers."

Office Furniture, etc.—H. M. Wade Manufacturing Co., Charlotte, N. C., wants (with view to agency) catalogues and prices on office chairs; flat, roller-top and sanitary desks; tables for offices and public buildings.

Office Supplies.—See "Stock Certificates, etc."

Paper-box Machinery.—H. M. Nesmith, Buffalo Gap, Tex., wants to correspond with manufacturers of and dealers in machinery for paper-box factory.

Paving.—Office Commissioners District of Columbia, Washington, D. C. Sealed proposals will be received until 2 P. M. May 6 for laying asphalt-block pavements; form of proposal, specifications and necessary information may be obtained from chief clerk Engineer Department, Room 427 District Bldg.; Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners, D. C.

Paving.—City of Grenada, Miss., invites bids until May 1 for construction of 75,000 to 150,000 feet granolithic sidewalks; ask for specifications; L. B. James, City Recorder.

Paving.—J. B. Winslett, City Secretary, Dallas, Tex., will receive bids until 3 P. M. May 3 for improving Cole Ave. from Lemmon Ave. to Knox St.; each bidder to bid separately on following materials: Asphalt macadam pavement, concrete curbs, concrete gutters and combination concrete curbs and gutters; certified check \$1000; specifications on file in office of City Secretary.

Paving.—City of Cullman, Ala., M. L. Robertson, Mayor, will let contract May 1 for construction of seven miles of concrete sidewalks.

Paving.—City of St. Louis, Mo., Room 300 New City Hall, will receive bids until noon May 5 for reconstructing 21st St. from Washington to Cass Ave. and 25th St. from Cass to St. Louis Ave.; plans, specifications, form of bid and other information can be had at office Board of Public Improvements.

Paving.—John Skain, Mayor, Lexington, Ky., will receive bids until 10 A. M. April 26 for paving with macadam and macadam with asphalt binder Kentucky, Oldham, Clay, Ashland, Bryan, Columbia, Lexington and Woodland Aves.; also for construction of concrete curbing and guttering; certified check, \$200.

Plaster Board.—John Laird, Alken, S. C., wants address of manufacturer of Capes patent plaster board or addresses of agents for same.

Plow Manufacturers.—H. D. Knight of Wood-Knight-Hawk Company, Oklahoma City, Okla., wants to correspond with view to placing order for manufacture of plows.

Porcelain Boxes.—J. R. Rossignol, 7 Park Ave. West, Savannah, Ga., wants addresses of manufacturers of porcelain boxes for electric switches.

Pump.—Athens Woolen Mills, Athens, Tenn., wants underwriters' fire pump; 750 to 1000-gallons-per-minute capacity; second-hand; first-class condition; late model.

Pumps, etc.—John D. Kelley, City Secretary, Galveston, Tex., will receive bids until noon May 3 for furnishing two centrifugal pumping units and piping, valves and other material and labor necessary to complete installation of same in conformity with plans and specifications; each pumping unit to consist of two single-stage eight-inch centrifugal pumps designed for direct connection to steam turbine of 107-kilowatt rating and 3300 R. P. M., and so piped as to admit of pumps being operated either in parallel against total head of 55 pounds per square inch or in series against twice this head; specifications may be seen in office of W. D. Masterson, city superintendent of electricity; certified check, \$200.

Pumping Equipment.—Sealed proposals endorsed "Proposals for Dry-dock Pumping Equipment" will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. May 27, and then and there publicly opened, for dry-dock pumping equipment at Navy-yard, Norfolk, Va. Plans and specifications can be obtained on application to bureau or to commandant of Navy-yard named; R. C. Hollyday, chief of bureau.

Rails.—Gilbert Lay, St. Clair, Mo., president Missouri, Arkansas & Gulf Railroad,

wants prices on 60 and 75-pound second-hand rail. (See "Railroad Equipment, etc.")

Railway Cars.—See "Motor Cars."

Railroad Equipment, etc.—Gilbert Lay, St. Clair, Mo., president Missouri, Arkansas & Gulf Railroad, St. Clair, Mo., wants prices on locomotives, cars, rails and other supplies.

Railway Equipment, etc.—West Missouri Electric Railway Co., H. D. Patee, general manager, Kansas City, Mo., wants prices on ties, rails, overhead work, spikes, fishplates, bridge materials and rolling stock.

Ranges.—J. Louis Spencer, 601 S. Church St., Charlotte, N. C., wants addresses of manufacturers of kitchen stoves or ranges that can also be used to heat water for house heating.

Road Construction.—Volusia County Commissioners, Deland, Fla., will receive bids to be filed with Samuel D. Jordan, Clerk Circuit Court, on or before May 1 for construction of one-half mile of shell or clay road on east end of New York Ave., as per specifications and instructions on file with Commissioner G. W. Fisher.

Road Construction.—State Roads Commission, John M. Tucker, chairman, Union Trust Bldg., Baltimore, Md., will receive bids until noon May 10 for construction of 57.10 miles of roadway and on concrete bridges as follows: Anne Arundel county—One section along Light St., Brooklyn, 31.00 mile (vitri-fied brick); one section, from Mount Zion to Birdsville, five miles (grading, draining and bridging only), and three sections along Annapolis boulevard, viz., from end of Section 1 to Revel, distance of 1.82 miles (stone macadam); from Boone to Magothy River, 3.97 miles (stone macadam); from Magothy River to Glen Burnie, 5.27 miles (pitch macadam). Baltimore county—State Road No. 1, Section 13, from Patapsco River to Baltimore & Ohio Railroad crossing, near Halethorpe (stone macadam), distance of 80.00 mile; State Road No. 1, Section 15AB2, from Baltimore & Ohio Railroad crossing, near Mt. Winans, to Caton Ave. (stone macadam), distance of 1.57 miles. Calvert county—One section, 4.26 miles in length along road between Owings and Prince Frederick (grading, draining and bridging only). Carroll county—One section, 5.29 miles, along road between Gamber and Fenby (stone macadam). Charles county—One section, 3.01 miles in length, along road from Waldorf to St. Mary's county line (gravel). Dorchester county—One section, 4.39 miles in length, along road from Shiloh to Brookview (stone macadam). Frederick county—One section along Monrovia to Kempton Rd., distance of 1.20 miles (stone macadam), and one section from New Market to New London, three miles (stone macadam). Garrett county—One section, between McHenry and Accident, distance of 4.39 miles (stone macadam), and one section from Allegany county line to Piney Grove, distance of 4.18 miles (pitch macadam). Montgomery county—Concrete bridge over Rock Creek. Prince George county—One section from District of Columbia line to Charles county line, distance of six miles (gravel); two sections along State Rd. No. 1, viz., Section 10, near Paint Branch, distance of 36.00 mile (stone macadam); Section 14B, through Bladensburg, distance of 47.00 mile (stone macadam). Queen Anne's county—One section from Centerville to Wye Mills, distance of 2.50 miles (stone macadam); one section at Wye Mills, distance of 22.00 mile (stone macadam). Bids to be made upon blank form contained in book of specifications, which will be furnished by commission upon application and payment of \$2 for each section; blueprints of each section furnished at rate of 25 cents for each half mile; bids to be accompanied by certified check for \$500.

Road Work.—Baltimore (Md.) Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until 11 A. M. May 3 for improvement work at Swan Ave. Druid Hill Park, and in connection with the paths and roadways in Riverside Park, including grading, construction of storm-water drains, concrete catch-basins, laying fiber conduit, construction of light post foundations, bitumen macadam work, concrete curbs, etc.; certified check, \$700; plans and specifications of Board of Park Commissioners are on file at office of engineer of board, Madison Ave. entrance to Druid Hill Park; William S. Manning, general superintendent of Park Commissioners.

Roads and Walks.—Office of Constructing Quartermaster, Fort Caswell, N. C. Sealed proposals, signed in triplicate, for construction of about 500 square yards macadam, concrete or gravel road and about 200 square feet concrete walk at Fort Caswell, N. C., will be received at this office until 3 P. M. May 12, and then publicly opened. Bidding blanks, plans, specifications and necessary information can be obtained at this office.

The guaranty part of proposal must be properly filled out in amount of 10 per cent. of total bid, or, if preferred, certified check for that amount may be enclosed in lieu of other guaranty. Entire job will be awarded to one bidder. Right is reserved to reject any and all bids. Address envelope containing proposals to Constructing Quartermaster, Fort Caswell, N. C., and mark same "Proposals for Roads and Walks." R. O. Edwards, First Lieutenant, Const Artillery Corps, U. S. Army, Constructing Quartermaster.

Roof Coverings.—Sealed proposals indorsed "Proposals for Roof Coverings for Buildings Nos. 1, 19, 51, 61, 62 and 72" will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. May 20, and then publicly opened, for roof coverings for buildings Nos. 1, 19, 51, 61, 62 and 72 at the Navy-yard, Norfolk. Plans and specifications can be obtained on application to bureau or to commandant of Navy-yard named. R. C. Hollyday, chief of bureau.

Screens.—Office Constructing Quartermaster, Fort Crockett, Galveston, Tex. Sealed proposals will be received until 3.30 P. M. May 10, and then opened, for screening 18 buildings; information furnished upon application; P. Whitworth, Captain and Quartermaster, United States Army.

Screws, Bolts, etc.—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until May 1 for furnishing Signal Corps with 5000 gross assorted screws and bolts, or such part thereof as may be required from May 1, 1911, to April 30, 1912; to be ordered from time to time as the necessities of the service may require: Round-head iron screws, flat-head iron screws, round-head blued screws, flat-head blued screws, round-head nickel on iron screws, flat-head nickel on iron screws, flat-head japanned screws, round-head brass screws, flat-head brass screws, round-head nickel on brass screws, flat-head nickel on brass screws, round-head iron machine screws, flat-head iron machine screws, round-head brass machine screws, flat-head brass machine screws, round-head nickel on brass machine screws, flat-head nickel on brass machine screws, round-head stove bolts and flat-head stove bolts; bidders will submit their printed screw list in duplicate as a part of their proposal and quote discounts therefrom.

Sewers.—Office of Commissioners, Washington, D. C. Sealed proposals will be received at this office until 2 P. M. May 8 for constructing sewers in District of Columbia. Specification, forms of proposals and necessary information may be obtained from chief clerk Engineer Department, Room 427 District Bldg., Washington, D. C.; Cuno H. Rudolph, John A. Johnston, Wm. V. Judson, Commissioners D. C.

Sewer Construction.—Board of Mayor and Aldermen, Park (R. Station Knoxville), Tenn., will receive bids until May 1 for construction of sanitary sewers; profile and specifications on file with O. C. Beaman, sewer committee; A. J. Queener, Recorder.

Showcases, etc.—Champion Lumber Co., Crestmont, N. C., wants glass counters and showcases; wants to correspond with manufacturers.

Signposts, etc.—Oakes & Lamotte, Darlington, S. C., want addresses of manufacturers of and dealers in metal and porcelain numbers and signposts for city street names. Send catalogues.

Soaps.—Chaitram Khullar & Co., Importers and merchants, Amritsar, India, are interested in prices on soaps.

Spiral Spring Belts.—A. G. Lordley, chief engineer State Hospital, Chattahoochee, Fla., wants spiral spring belts for dishwashers.

Stamping Machinery.—See "Name-tabs Machine."

Steam Shovel.—Eastern Railway Supply Co., 413 American Bldg., Baltimore, Md., wants one No. 0 and one No. 1 shovel (The preferred).

Steam Plant.—Department of Interior, United States Reclamation Service, Washington, D. C. Sealed proposals will be received at office of United States Reclamation Service, Los Angeles, Cal., until 2 P. M. May 15 for furnishing steam-power plant for Rio Grande Project, New Mexico-Texas; for particulars address United States Reclamation Service, 605 Federal Bldg., Los Angeles, Cal., or Washington, D. C.; F. H. Newell, director.

Steel.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids on May 9 for furnishing 38,500 pounds of forged or hot rolled steel, 22,000 pounds of sheet steel and 19,900 pounds of galvanized sheet steel; delivery, Washington, D. C.; schedule No. 3510; for copies apply to navy pay office nearest navy-yard.

Steel Bridge.—Franklin county, S. J. Peetree, Judge of Probate, Russellville, Ala., wants estimates on steel bridge across Big Bear Creek, on Military Rd.

Stock Certificates, etc.—M. H. Edwards, Box 567, Abbeville, La., wants prices on corporation stock certificates, seals and office supplies.

Store Fixtures.—Nelson & Blum Co., Greenville, Miss., will want prices on fixtures for store.

Store Fixtures.—See "Showcases, etc."

Stoves.—M. E. Johns, 507 34th St., Richmond, Va., wants prices on two kitchen ranges.

Sugar-mill Machinery.—Sealed bids will be received up to 12 noon May 15 for one cane crusher, 26x60, to be erected at Harlem State farm in Fort Bend county, Texas, and one pair of independent cane engine drivers; send specifications with bids; bids to be opened at office of Prison Commission in Huntsville, Tex.; Louis W. Tittle, Prison Commissioner.

Talc.—Chas. R. Fife Company, 1652 Pierce Bldg., St. Louis, Mo., wants carloads talc; crude; delivered; cheap.

Telephone Equipment.—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until May 1 for furnishing Signal Corps with four-switchboard local battery, five pair of cords capacity, five pairs equipped; 25 lines capacity, 25 lines equipped, equal to Dean No. 2, figure 69, Dean Electric Co.'s bulletin No. 104, to be fully equipped, ready for operation; one strip of 10 drops and jacks mounted; drops No. 4D, front and shutter style, 500 ohms, Nos. 61 to 70, for North Electric local battery switchboard No. 232, purchased under order 938.

Telephone Equipment.—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until May 1 for furnishing Signal Corps with 20,000 Columbia dry cells, or such part thereof as may be required from May 1, 1911, to April 30, 1912, in standard packages; to be ordered from time to time as necessities of service may require; No. 4 Reserve, No. 40 Reserve, No. 5 Reserve, No. 6 Reserve, No. 7 Reserve, No. 8 Reserve; batteries (two cells each) for cavalry buzzers, in accordance with Signal Corps drawing No. 410-c; cells, dry, miniature, 3/4x2 1/2 inch; all above cells are of special type manufactured by National Carbon Co. of Cleveland, O., for use of Signal Corps of Army; dry cells, reserve type, Nos. 4, 40, 5, 6, 7 and 8, are to be furnished with jackets of green chipboard printed in black and treated with paraffine; regular terminals are desired; two-cell type of battery for cavalry buzzer should have printed on one side in letters one-quarter inch high, "Dry Cell for Cavalry Buzzer."

Tombstones.—Newport News Cemetery Co., Newport News, Va., wants prices on permanent headstones for single graves; stone, cement, etc.

Toys.—Chaitram Khullar & Co., Importers and merchants, Amritsar, India, are interested in prices on toys.

Traction Engine, etc.—A. J. Conner, chairman Road Commissioners, Rich Square, N. C., wants prices on traction engine; also wagons for hauling sand, etc., for road construction; will probably purchase.

Wagons.—See "Traction Engine," etc.

Water Heaters.—P. S. Martin Company, Broadway, Va., wants prices on water heaters burning hard coal, such as used with tanks of 100-gallons capacity.

Water-wheel.—Appalachian Training School, D. D. Dougherty, principal, Boone, N. C., wants small turbine water-wheel.

Water-works Construction.—Sealed bids will be received until 1 P. M. May 5 for construction of complete water-works system for village of Bassfield, Miss.; plans and specifications on file with J. P. Dear, clerk, and with Xavier A. Kramer, engineer, Magnolia, Miss.; bid blanks obtainable from engineer.

Water-works Materials.—City of Soper, Okla., Harley Hughes, Clerk, will receive bids on 110 tons cast-iron pipe, 30,000-gallon steel tank on tower, deep-well geared pump, 12-horse-power gasoline engine, 10 hydrants, valves, etc.

Well-drilling Machinery, etc.—J. L. Girton, 10 and 11 Phillips Block, Winchester, Tenn., wants to correspond with manufacturers of oil-well machinery, oil-well contractors, etc.

Wheelbarrows, Hand Cars, etc.—Sealed proposals will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. May 26, and then opened, for furnishing hand cars, push cars, wheelbarrows, shov-

els, picks, wrenches, nails, cutters, back-saw blades, hose clamps, sledge handles, stable brooms, scrubbing brushes, lanterns, garbage cans, brass unions, manilla rope, canvas, leather, toilet paper, fireclay, rosin, caustic soda and crude carbolic acid; blanks and general information relating to this circular (No. 630) may be obtained at above office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans; 1086 North Point St., San Francisco; also from U. S. Engineer Office in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

Wheelbarrow Manufacturers.—"Wheelbarrow," care Manufacturers Record, wants to secure wheelbarrow sales account for Southern States except Texas.

Wire.—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until May 2 for furnishing 12 miles of wire, copper, hard drawn No. 10, in one-half mile coils, specifications 79-A.

Wire.—J. H. Macleary, Suffolk, Va., wants carload No. 9 black tie wire, annealed, for loading logs on flat cars. Quote price f. o. b. Wilmington, N. C.

Wireworking Machinery.—See "Coil-springs Machinery."

Woodworking Machinery.—H. M. Nesmith, Buffalo Gap, Tex., wants to correspond with manufacturers of and dealers in machinery for axe, hoe and hammer-handle factory, also woolen-ware factory.

INDUSTRIAL NEWS OF INTEREST

Hosiery Mill Offered.

The Colanhus Manufacturing Co.'s hosiery mill at Paduch, Ky., is offered for sale or lease. It is equipped for manufacturing hosiery, the daily output being 1000 dozen pairs of hose. For full details address F. P. Toof, the company's agent.

A Correction.

The recently mentioned shipment of wheels by the Decatur Car Wheel Co. from its Savannah works to Genoa was an error. The shipment was consigned to parties in Halifax. The Decatur Car Wheel Co. has its main offices in Birmingham, with works in that city and at Atlanta and Savannah.

Triumph Electric Co.

The Boston office of the Triumph Electric Co. of Cincinnati has been removed from 101 High St. to more commodious quarters at 92 Pearl St. This change of location was made necessary by the large increase in the volume of business, requiring larger quarters for this branch, of which C. A. Totton is district office manager.

Iroquois Iron Works Warehouse.

In order to more efficiently and advantageously handle its increasing business in the Middle West, the Iroquois Iron Works of Buffalo has established a warehouse in Chicago, where a complete line of macadam and tandem rollers, asphalt tools, kettles, etc., is carried for immediate shipment. The new shipping depot is in charge of T. H. Morris, Chicago representative, with offices in the Tribune Bldg.

Granite Development Proposition.

The owners of a building and monumental granite plant and quarry in Oklahoma are desirous of financing their property so that operations can be extended. They have large contracts and are steadily securing additional contracts. It is claimed this proposition offers an excellent opportunity for investment. Information in detail can be obtained by addressing the Ruggles Red Granite Co. of Granite, Okla.

Gunpowder and Dynamite Machinery

The I. & E. Greenwald Company, 720 E. Pearl St., Cincinnati, in addition to its line of automatic steam engines, etc., manufactures the machinery used in making gunpowder and dynamite. An order for a complete equipment, including engines, wheel mills, glaze mills, presses, electrical apparatus and accessories, was recently received from the Fort Pitt Powder Co. of Pittsburgh. The Greenwald company has its New York office at 159 Nassau St.

Columbia Incandescent Lamp Co.

In order to serve its customers in the most efficient manner practicable, the Columbia Incandescent Lamp Co., main office and works at St. Louis, now occupies new Philadelphia offices at Nos. 639-641 Bourse Bldg. It had been located in the Real Estate Trust Bldg. for the past eight years, and this move brings the offices and warehouses under the same roof, thus enabling the company to handle shipments from its Philadelphia stock to much better advantage to customers as well as itself.

Edwards' Metal Sheet.

The first number of a monthly publication devoted to the interests of the Edwards Manufacturing Co., 411 Culvert St., Cincinnati, has been issued under the title of "Edwards' Metal Sheet." This company (popularly known as "The Sheet Metal Folks") describes and illustrates its various products in this publication and a brief history of the growth of the company is included, with

numerous photographic views. Striking views of "Reo" cluster shingles and Edwards' metal Spanish tile are shown on the front and back pages.

National Tube Co.

On the evening of April 28, at the monthly meeting of the Pittsburgh Railway Club, F. M. Speller, metallurgical engineer of the National Tube Co., will read a paper on locomotive boiler tubes. As a prelude to this meeting a visit will be made to the Ellwood City plant of the National Tube Co. of Pittsburgh by the Railway Club, where the members will have an opportunity to observe the manufacture of Shelby cold-drawn steel tubes and Shelby hot-rolled, seamless steel tubes.

Cortright Metal Shingle Advocate.

The "Cortright Metal Shingle Advocate," volume 7, number 4, published by the Cortright Metal Roofing Co., 50 N. 23d St., Philadelphia, and 125 W. Van Buren St., Chicago, contains information regarding Cortright metal shingles based on over 25 years' experience in roofing use. Illustrations of their use on several different types of buildings are shown, and numerous testimonials covering the use of these shingles for recent years and back for 22 years' use are printed. One of Cortright's selling talks is also given, and attention called to catalogue entitled "Concerning That Roof."

Hamilton Power Pumps.

Equipments for power pumping comprise a class of machinery that is in large demand, and this demand is constantly increasing throughout the mechanical world. They are designed and built by the best-known engineering and machinery constructing companies of the country, and American designs are meeting the needs of power-pump users. Among the pumps now being offered are the Hamilton power pumps, which are described in bulletin G, published by the Hoovers-Owens-Rentschler Company of Hamilton, O. This company builds the Hamilton power pumps, and is prepared to send details of their construction and efficiencies to inquirers.

Sale of Machine Tools.

A sale of nearly new machine tools will begin on May 1 at 214 and 216 N. Holliday St., Baltimore. This important private sale begins at 9 A. M. each day and will extend to 4.30 P. M., the machines to be sold for cash as they are inspected by prospective purchasers. None of the machines and tools are over four years old, and many have hardly been used at all. They consist of lathes from 14 to 17-inch swing, plain and universal milling machines, Cincinnati 72 and 36-inch planers, Bickford plain and universal radials, Gould and Eberhardt gear cutters and shapers, Fossleek floor boring machine, upright drills, keyseaters, and miscellaneous tools.

Eclipse Concrete Mixer.

The Standard Scale & Supply Co., 243-245 Water St., Pittsburgh, has published through its Chicago office, 1345-1347 Wabash Ave., catalogue Y-49, illustrating and describing the Eclipse concrete mixer in its various combinations with steam and gasoline engines, mounted on trucks, skids, etc., and showing the work that can be accomplished by this mixer. The Eclipse mixers are built for low charging direct from the wheelbarrows, requiring only slightly-inclined runways. In addition to the Standard scales and the Eclipse concrete mixer, this company manufactures the Standard scales, steam engines, boilers, gasoline engines, contractors' hoists, wheelbarrows, carts, trucks,

etc. The company has branch houses and agencies in 18 principal cities.

Exports of Buffalo Forge Co.

Recent orders reported by the Buffalo (N. Y.) Forge Co. for large instalments of mechanical draft apparatus include, among others, Cambria Steel Co., Johnstown, Pa.; American Smelting & Refining Co., New York; Burgess Sulphite Fiber Co., Berlin, N. H.; Knickerbocker Portland Cement Co., Hudson, N. Y., and several export orders from the company's agents in Germany, Japan and South America. The company's export business is reported to be particularly active so far this year and with excellent prospects of exceeding any former season. The company has branch offices in New York, Pittsburg, Philadelphia, Cincinnati, St. Louis, Charlotte, Denver, Los Angeles, Chicago and Montreal.

Slow-Speed Blower Installations.

The Standard Blower & Metal Co., Atlanta reports the recent installation of its slow-speed blower system in the plants of W. M. Ritter Lumber Co., Ritter, N. C.; Gresham Manufacturing Co., Griffin, Ga.; Campbell & Dunn Manufacturing Co., Tullahoma, Tenn.; Tennessee Mantel Manufacturing Co., Knoxville; Arkay Stave Works, Columbus, Miss.; Greenville Chair Co., Greenville, Tenn. The Standard Blower & Metal Co. manufactures slow-speed low-power blower systems, dust collectors, fans, furnace feeders, etc., and is ready at all times to have its engineers call on prospective purchasers to design the blower system to meet individual requirements, and to discuss the system in detail at no charge for the service of the engineer.

Fireproof Portable Garages.

The Southern Building Material Co., Arcade Bldg., Norfolk, is sales agent for fireproof portable garages, which have been sold to leading automobile owners in different parts of the United States, and of which six have been shipped to South America. All these buyers have notified the owners that they were very satisfactory. The garages are strictly fire and water proof, lasting, portable, easily erected, and it is apparent that the demand for them will continue to increase as the public becomes familiar with the value and advantage of owning the portable garage. This company sells building materials of all kinds and has taken the agency for the portable garage as an additional line.

The Diamond Rubber Co.

The Diamond Rubber Co. of Akron, O., was well represented at the triple convention of the Southern Supply & Machinery Dealers' Association, the National Supply & Dealers' Association and the American Supply & Machinery Manufacturers' Association, recently held at Louisville. The rehabilitation of the merchant marine was one of the important subjects under discussion, and the re-sale price problem was one of the principal topics of the well-attended business session. Previous reference has been made in these columns to this largely-attended convention, and the testimony of the representatives of the Diamond Rubber Co. that were present amplifies the reported success of the meeting.

Construction Economist.

Daniel J. Hauer, consulting engineer and construction economist, Park Row Bldg., New York, announces he will devote his time to consulting engineering and the introduction of methods of system and economy in contracting work, and that his experience in construction and engineering for 22 years enables him to be of special service. He states it is evident there is a large field for system in contracting work, and that systematic methods of getting the most value out of labor, by preventing waste and by controlling expense, have been introduced with great profit in manufacturing. This same systematic effort is to be applied to contractors' methods and work. A folder entitled "System in Contract Work" will be sent on request, and a full discussion of this subject taken up with interested individuals or companies.

"Where the Ships Stop."

That Houston is destined to be one of the largest shipping ports of Texas and the entire country will not be denied by people conversant with that city's advantages and growth in recent years. Among the enterprises now progressing at Houston is the development of "Houston Harbor," the addition of which is being referred to as "Where the Ships Stop." This addition is for manufacturing industries, etc., and is located about three and a half miles from the courthouse. It is owned by business men and bankers of Houston, who have prepared data for which inquiries are invited. Manu-

facturers seeking locations for plants are invited to correspond, as there are a number of free sites offered. Houston's great ship channel and 17 railroads meeting the sea will afford ample transportation facilities for the output of plants. Address inquiries to the A. D. Alderson Company, 427 First National Bank Bldg., Houston, Tex.

United States Can Co.

In 1903 O. C. Huffman organized the Virginia Can Co. at Buchanan, Va., and it has grown until it now has a capital of \$225,000 and makes 150,000 cans per day of 10 hours. The cans are sold largely to the Virginia packers of tomatoes and throughout the South to fruit and vegetable packers. In 1908 the United States Can Co., Harper and Linden Sts., Cincinnati, was organized with Mr. Huffman as president, and has grown until it is now making 500,000 cans per day. The products of this factory are sold all over the United States, not only for fruits and vegetables, but the company has a large trade in lithographed and plain lard pails, coffee cans, friction-top cans for syrup, paints, etc., as well as other round cans for various purposes. Both these companies maintain a sales office at Chattanooga and New Orleans, and make a specialty of handling the large and valuable Southern and Southwestern trade.

McCormick Waterproof Cement Compound.

The McCormick Waterproof Portland Cement Co., Bank of Commerce Bldg., St. Louis, has opened an office, 332 Reserve Bank Bldg., Kansas City, Mo., in order to better care for its increased business west of the Mississippi, with Wm. H. K. Bonnewitz as special representative. Other offices are 92 Liberty St., New York; Keystone Bldg., Pittsburg; 10 Silver St., Boston; 161 Randolph St., Chicago. The McCormick company claims that Portland cement made waterproof by its process produces a cement that will resist water pressure and also the action of alkalies, sewer gases, steam, acids in solution and sea water. The waterproofing compound is mixed with any brand of Portland cement right at the mill, and is used exactly as the plain cement, which eliminates the element of labor expense and at a low cost for the compound. Reports of tests and other information will be sent on inquiry.

Foster Superheaters.

The Power Specialty Co., 111 Broadway, New York, states that users of Foster superheaters repeat their orders until from some of its users the fifteenth repeat orders are now coming in. Among the orders recently received are superheaters for 9162 horsepower in Stirling boilers for the Cleveland Electric Illuminating Co.; 5400 horsepower in Babcock & Wilcox boilers for the Solway Process Co., Detroit; 6000 horsepower in Edge Moor boilers for Milwaukee Electric Railway Co., Milwaukee; 7500 horsepower in Babcock & Wilcox boilers for Winnipeg Electric Railway Co., Winnipeg, Manitoba; 6000 horsepower for New York, New Haven & Hartford Railroad Co. at Waterbury (Conn.) plant; 9450 horsepower for Stone & Webster Engineering Corporation in the plants of Minneapolis General Electric Co., Jacksonville Electric Corporation and El Paso Electric Railway Co. The Power Specialty Co. has branch offices in the South at Birmingham in the Brown-Marx Bldg. and at Houston in the Scanlan Bldg.

Frick Company Sales.

The Frick Company of Waynesboro, Pa., has made many important sales of ice making and refrigeration machinery recently, including installations of its improved flooded system. Some of these improved flooded-system installations have replaced other systems and machinery. Recent large sales include 25-ton ice-making plant, with improved flooded freezing system, distilling system, boiler and storage piping, for Vandergrift (Pa.) Ice Manufacturing Association; 30-ton refrigerating machine and two-ton freezing system for Balard Packing Co., Marion, Ind.; 10-ton refrigerating machine for cold storage of poultry, eggs, etc., for Ben Ablon, Dallas, Tex.; two ammonia compressor cylinders, freezing and distilling systems, and changing present system to improved flooded freezing system, D. C. Deal, Palacios, Tex.; 25-ton ice plant, with improved flooded freezing system, distilling system and storage piping, for Granger (Tex.) Ore Mills; similar plant of 30 tons for Snell Creamery Co., Detroit; 50-ton improved flooded freezing system and 50-ton distilling system for Lake City Ice Co., Cleveland. Other sales to the number of 45 range from 20 and 30-ton plants down to a one-half-ton ice-making system and storage piping for the Union Club, Boston. These

sales by the Frick Company extend to all parts of the country, including the South and Southwest, and the company has branch offices at Atlanta and Dallas, through which inquiries in those sections of the country are received.

Large Condensing Installations.

The Wheeler Condenser & Engineering Co., Carteret, N. J., has contracts for five large surface condensing installations of the Wheeler drytube type. In this type the tubes are so grouped as to secure the best distribution of steam, and drain plates are interposed at numerous levels to prevent steam condensed in upper parts from falling upon and flooding tubes in the lower part. These drain plates also carry off the water of condensation to the hot well direct, thus insuring high hot-well temperature. Three of these installations will be for the New York Edison Company's Waterside No. 1 plant, and will consist of circulating pump, hot-well and vacuum pumps, together with specially designed base condensers, to operate in connection with three 20,000-kilowatt turboalternators. The condensers will have the remarkable rated capacity of 300,000 pounds of steam per hour and will be the largest of their kind. The other two condensing outfits are for the new power station of the Minneapolis General Electric Co., Minneapolis.

New Westinghouse Generator.

The increasing use of electric-power demands overload capacities in direct-current generators, together with sparkless commutation and the highest degree of mechanical excellence. The new standard line of Westinghouse type Q Interpole direct-current generators, manufactured by the Westinghouse Electric & Manufacturing Co., Pittsburg, fulfills these requirements with thorough ventilation, ruggedness and relatively light weight. Heavy overloads may be imposed without sparking or flashing, and wear on commutators and brushes is reduced to a minimum. The frames are of cast steel, a material of high magnetic permeability, which furnishes ample strength with economy of both weight and space, contributing to good ventilation, low freight charges and easy handling. The rotors or armatures are designed for direct mounting on the shaft of the prime mover, which may be of any type of suitable speed. The stators or fields are arranged for mounting on masonry foundations or directly on the bedplate of the prime mover. The generators are standardized for desirable and usual ratings from 25 kilowatts to 1000 kilowatts, with speeds conforming to the best engine practice. Machines of 250-volt rating are regularly equipped for three-wire operation. With Westinghouse development of the Interpole principle, it is claimed that sparkless commutation is obtained under practically all conditions, from no load to very heavy overloads.

TRADE LITERATURE.

Texas Properties for Sale.

Among the Texas properties offered for sale by G. A. Bahn of Austin are both houses and lands. His offers include a 12-room house with modern conveniences, including mineral-water well, seven acres of land, orchard, garden, etc., this property being offered as especially suitable for a sanatorium. Fig and orange land in La Salle county, 640 acres of land containing silver deposits, etc., are also listed by Mr. Bahn. He will send particulars to inquirers.

Direct-Current Generators.

The Triumph Electric Co., Cincinnati, has issued bulletin No. 461 on Triumph direct-current engine-type generators. These generators are built in capacities of 30 to 1000 kilowatts. The sizes from 4 up to 25 kilowatts are known as the "marine type," and are fully described in another bulletin. Bulletin No. 463 describes the larger generators mentioned and the construction of their integral parts, with illustrations of each and a view of the complete generator as installed. This bulletin supersedes No. 251.

Palste Standardized Wiring Material

A condensed catalogue and price-list of standardized wiring material has been issued by the H. T. Palste Company, Philadelphia. This material is manufactured by the company, and the condensed catalogue has reference number, codeword, number of pieces in standard package, weight of package and list price for every item, with illustration and brief description of each. This form of catalogue has met with evident appreciation in previous years, and the aim to simplify material by standardization has also produced gratifying results. For these reasons the present catalogue is simply an improve-

ment and extension of that of last year, and with the further development of the well-known panel boxes and pipe tablets an entirely new line of snap-shell sockets has been added. Particular attention has been given to standardization to avoid multiplicity of design. To meet the growing importance that the wireman should use material approved by the National Board of Fire Underwriters, these materials are distinguished from others in the catalogue. The company has branch offices at 26 Cortlandt St., New York; 307 S. Desplaines St., Chicago, and 7 Otis St., Boston.

Dennison's Handy Boxes.

The Dennison Manufacturing Co., 26 Franklin St., Boston, will issue a series of attractive and interesting booklets treating of its various manufactures. The first of the series, which has been recently issued, treats of "Dennison's Handy Boxes," which are described and shown in colored illustrations, with a statement of the many forms in which they are useful. A list of the 41 stores and offices of the company is appended. This booklet may be obtained by application to the nearest office of the company in any of these principal cities.

Commercial Apple Orchards.

A booklet called "Wealth in Apples" has been issued by the Piedmont Orchards, Inc., Candler Bldg., Annex, Atlanta. It describes the company's unit system of handling, operating and selling commercial apple orchards. The system is being applied to 1800 acres of apple lands in Habersham county, Georgia. It is fully explained and a partial list of purchasers is given, together with a statement of the advantages of this section of the country in climate, transportation, etc., for the successful raising and marketing of apples.

Texas Gulf Coast Country.

The Taylor-Fowler Land Co., Gunter Bldg., San Antonio, Tex., issues a pamphlet describing its Hollywood Park development in the "rain belt" of the Gulf Coast of Texas. A bird's-eye view of the Hollywood Park district is shown with the Colorado River, the Santa Fe Railway and the town of Lake City included. Several pages are devoted to a description of the advantages of this section, with the products, means of transportation, farming facilities, schools, etc., and all matters that would be of interest to prospective settlers. A map of the country from Houston to Matagorda Bay, including Wharton and Bay City, on each side of Hollywood Park, forms the back cover of the pamphlet.

"Typhoon" Fans.

The Typhoon Fan Co., 154 Broadway, New York, has published a folder describing Typhoon standard fans, special fans, brick-set fans, and direct-connected fans with alternating current or direct current motors. Price-list and dimensions of the standard fans are included, and it is stated that prices for the special fans will be furnished on application. Illustrations of each type are presented, together with a statement of comparative tests as to their efficiency and economy, and a partial list of users.

Cellular and Keyridge Steel.

The Steel Fireproof Construction Co., Carthage Ave. and C. C. & St. L. Railway, Cincinnati, has issued a catalogue describing and illustrating its patent cellular steel construction as a non-corrosive fireproof building material for floors, roofs, walls, partitions, etc. Line drawings show the form of construction and the method by which the sections are united by slip joints, and used in connection with concrete, cement or plaster. The manner in which this construction stands heat and water is shown in a series of fire and water tests. Keyridge steel is of somewhat different form, and its construction and uses are fully described. References are made in the catalogue to numerous buildings in which the company's fireproof steel construction has been used.

"Penberthy Engineer and Fireman."

The Penberthy Engineer and Fireman is a monthly magazine published in the interest of steam users by the Penberthy Press department of the Penberthy Injector Co., 372 Holden Ave., Detroit. It is now in its 18th volume, subscription price 50 cents for 12 issues, and sample copy will be sent to any engineer or fireman, or anyone interested who will send his name and address. This publication devotes about 80 pages to selections from the various standard industrial and technical journals and other literature. It contains several advertisements, including the well-known Penberthy injectors, sight-feed oilers, "Safeguard" automatic water

gauge, "XL 96" improved injector, siphon or steam jet pump, Penberthy noiseless water heater for use with live steam, and notes other publications issued by the Penberthy Press.

Grinding and Grinding Wheels.

A bulletin called "Grits and Grinds" issued by the Norton Company and Norton Grinding Co., Worcester, Mass., describes the uses of "Alundum" as an abrasive in the form of grinding wheels and as a compound for valve grinding and wherever abrasive grits may be required. This bulletin contains microphotographs showing comparative sizes of grains used in the grinding wheels of different designations. Articles are included relating to grinding practice under the following captions: "Rapid Turning Preparatory to Grinding," "The Modern Grinding Wheel," "The Cast-Iron Car Wheel and the Grinding Machine," "Twist Drill Grinding," "Alundum Valve Grinding Compound." Important suggestions for ordering grinding wheels are given and the dust system in use at the Norton Company's plant shown by illustrations.

The Petroleum Iron Works Co.

The first general catalogue of the Petroleum Iron Works Co., Sharon, Pa., and branch offices in New York, St. Louis, and Houston, Tex., has been issued, bound in heavy paper double cover, so arranged with fasteners that additions can be easily made when published. It states that this company makes and erects every variety of light and heavy steel plate construction: tankage for all purposes of any size; oil refinery equipment, stand pipes, water towers, smoke stacks, penstocks, blast furnaces, hot metal ladles, boilers, annealing boxes, "Gem" fuel oil burners, "Washington" automatic oil and gas separators, portable receiving tanks, etc. Full-page illustrations are included, showing actual installations of the various products and information given as to special work, presenting orders for special designs, etc. Another booklet issued by this company on "Fuel Oil Equipments" contains data on the use of fuel oil, with relative efficiency as compared with coal and wood, and the other advantages of its use.

Bitu-Mortar Waterproofing Compound.

The Bitu-Mortar Co., 25 W. 42d St., New York, has issued a booklet called a "Treatise on the Ideal Method of Waterproofing," describing the manufacture and uses of bitu-mortar waterproofing compound. This compound is made for mixing with cement mortar to form a waterproof mortar where it would otherwise be absorbent, and is of value wherever cement mortar is used or it is desirable to have waterproof construction. Applied to brick work, the mortar throughout all the joints forms a complete moisture-proof wall. In case of completed masonry walls, the waterproofed mortar may be applied as a coating; also in case of iron or steel reinforcing bars, etc., the coating of waterproof mortar may be so applied as to permanently prevent rusting. The booklet gives instructions as to the proper proportions for mixing, etc., and it is stated that the additional cost to the ordinary mortar is small.

Efficient Gas Power.

The Elyria Gas Power Co., Elyria, O., has issued advance bulletin No. 22 on facts about gas-engine practice as exemplified by "The Little Big Engine" built by that company. This engine is so constructed that it is easily adapted to natural gas, artificial city gas, producer gas and gas from gasoline and distillates. The bulletin contains 47 pages of information on gas engines, producer-gas economy, detail and general illustrations of the engine and its parts, etc. Considerable stress is placed upon the fact that all sales are made direct from manufacturer to user, and that the information regarding the qualities and economy of using this engine and as to sizes required for stated work to be done is all given in printed form through catalogues and standard advertising mediums. This brings the production cost down so that the engine can be sold at a considerable reduction for the same quality, and all statements of efficiency, etc., are made and fulfilled by the responsible builder of the engines. This catalogue is valuable for the information contained, aside from its bearing on "The Little Big Engine," and will be sent to interested persons on request.

Railway Settees and Public Seating.

The American Seating Co., 218 S. Wabash Ave., Chicago, has issued catalogue No. 32 describing and illustrating, with full-page views, its single and double settees of various styles and woods and its other manufac-

tures in public seating as required in railroad stations and offices, courtrooms, libraries, etc. Five photographic views are included showing the company's plants at Grand Rapids, Racine and Manitowoc, and woodworking plants and foundries at Buffalo. It is stated in the catalogue under the heading of "Facts About Construction" that "in the construction of our settees attention is given to every detail to insure strength and durability. The simplest and most approved methods are adopted, and we use only the best selected materials. Our settees with backs and seats of solid stock are examples of the best workmanship throughout. The veneer settees are of the nailless type." This company manufactures "public seating" exclusively. It is also prepared to submit special designs where desired and furnish estimates of cost. Where public seating is constructed in accordance with architect's designs and specifications the company co-operates with the architect for the best results attainable. The company has branch offices in New York, Philadelphia and Boston.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,
Baltimore, Md., April 26.

There was a fair amount of activity in the Baltimore stock market during the past week, and the trading showed sales as follows: United Railways common, 17½ to 18½; do. trust certificates, 18½ to 18½; do. incomes, 63 to 64½; do. funding 5s, 85½ to 86; do. do. scrip, 86; United 4s, 83½ to 84½; Consolidated Gas, Electric Light & Power common, 89½ to 90½; do. preferred, 95½ to 96; do. 4½s, 87½ to 88½; do. notes, 100; Consolidated Gas 4½s, 96½ to 96½; Seaboard Company common, 27 to 28, with last sale at 26½; do. second preferred, 59½ to 58; Seaboard 4s, stamped, 86½ to 87; do. adjustment 5s, 78 to 78½; Consolidated Cotton Duck common, 5 to 3, with last sale at 3½; do. preferred, 21 to 20; Mt. Vernon-Woodberry Cotton Duck 5s, 73 to 75; G. B. S. Brewing 4s, 44½.

Bank stock sold as follows: Bank of Commerce, 13½; Old Town, 13½; Farmers and Merchants, 51; Mechanics, 29.

Fidelity & Deposit sold from 152 to 153; Continental Trust, 215 to 225; Baltimore Trust, 165 to 164; Fidelity Trust, 220; Mercantile Trust, 144; American Bonding, 79; Maryland Casualty, 90.

Other securities were traded in thus: Northern Central Railway stock, 127½ to 126½, with last sale at 127; Alabama Consolidated Coal & Iron 5s, 86½ to 85½; do. preferred, 73½; Chicago Railway 5s, 99½ to 100; Houston Oil common, 7¼; do. preferred, 51 to 52; United States Steel common, 7¼; West Penn Traction 5s, 97; Atlantic Coast Line of Connecticut, 227½ to 229; Augusta Railway & Electric 5s, 101½; Atlantic Coast Line Consolidated 4s, 95½; Consolidation Coal, 105½ to 102½; Georgia, Carolina & Northern 5s, 105; Lake Roland Elevated 5s, 109½; Macon Railway & Light 5s, 96½; West Virginia Central 6s, 100½; Baltimore Electric 5s, stamped, 93½ to 94½; Georgia & Alabama Consolidated 5s, 105½ to 105; Baltimore City 5s, 1916 104; do. 3½s, 1928, 93½; do. do. 1930, 93½; do. 4s, 1957, 100½; do. 3½s, 1980, 90 to 90½; Norfolk & Portsmouth Traction 5s, 87½ to 89; do. preferred, 80½; Fairmont & Clarksburg Traction 5s, 99; Norfolk & Atlantic Terminal 5s, 92; Carolina Central 4s, 92; Jamison Coal & Coke, George's Creek 5s, 94½ to 95; Virginia Railway & Power 5s, 94½ to 96; Washington & Vandemere 4½s, 95; Wilmington & Weldon 5s, 110½; Maryland Electric 5s, 98; Fairmont & Clarksburg Traction preferred, 77; Maryland & Pennsylvania incomes, 62½; Baltimore City Passenger 4½s, 100; Norfolk Railway & Light 5s, 99½ to 100; do. common, 25½; Fairmont Coal 5s, 97½; Florida Southern 4s, 91½; Chicago, Rock Island & Pacific refunding 4s, 1934, 88½; Merchants & Miners' Transportation Co., voting trust, 76; Georgia Southern & Florida first preferred, 93½; Baltimore Electric preferred, 42; Pennsylvania Water & Power 5s, 88; Baltimore City Passenger 5s, 100½; Anacostia & Potomac 5s, guaranteed, 102½.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
April 26, 1911.

| Railroad Stocks. | Par. | Bid. | Asked. |
|------------------------------|------|------|--------|
| Atlantic Coast of Conn. | 100 | 228 | 230 |
| Charleston Consolidated | 50 | 34 | 34 |
| Georgia Sou. & Fla. 1st Pfd. | 100 | 92 | 94 |
| Norfolk Railway & Light | 25 | 25 | 25 |
| Norfolk & Ports. Trac., new | 100 | 47½ | 65 |
| Norfolk & Ports. Trac. Pfd. | 100 | 80½ | 81 |
| Seaboard Co. Common | 100 | 26½ | 26½ |
| Seaboard Co. 1st Pfd. | 100 | 85 | 88 |
| Seaboard Co. 2d Pfd. | 100 | 58½ | 58½ |
| United Ry. & Elec. Co. | 50 | 18½ | 18½ |
| Virginia Ry. & P. Common | 100 | 83½ | 83½ |

| Bank Stocks. | Par. | Bid. | Asked. |
|---------------------|------|------|--------|
| Bank of Baltimore | 100 | 152 | 152 |
| Bank of Commerce | 15 | 31½ | 31½ |
| Citizens | 10 | 40 | 41½ |
| Drovers & Mechanics | 100 | 222 | 229 |
| Exchange | 100 | 165 | 165 |
| Farmers & Merchants | 40 | 50½ | 50½ |
| First National | 100 | 148 | 152 |
| Howard | 10 | 13½ | 13½ |
| Marine | 30 | 42 | 42 |
| Maryland | 20 | 26½ | 26½ |
| Merchants | 100 | 186 | 190 |
| Mechanics | 10 | 28½ | 28½ |
| National City | 100 | 118 | 118 |
| Old Town | 10 | 13½ | 14½ |
| Union | 100 | 136 | 136 |
| Western | 20 | 40 | 40 |

| Trust, Fidelity and Casualty Stocks. | Par. | Bid. | Asked. |
|--------------------------------------|------|------|--------|
| American Bonding | 25 | 78 | 79 |
| Baltimore Trust | 100 | 165 | 165 |
| Continental Trust | 100 | 223 | 225 |
| Fidelity & Deposit | 50 | 150 | 155 |
| Maryland Trust | 100 | 81 | 81 |
| Maryland Trust Pfd. | 100 | 111 | 115 |
| Maryland Casualty | 25 | 91 | 92 |
| Mercantile Trust & Deposit | 50 | 143 | 144 |
| U. S. Fidelity & Guaranty | 100 | 157 | 160 |

| Miscellaneous Stocks. | Par. | Bid. | Asked. |
|-------------------------------|------|------|--------|
| Ala. Con. Coal & Iron | 100 | 25 | 40 |
| Ala. Con. Coal & Iron Pfd. | 100 | 72½ | 80 |
| Baltimore Brick Pfd. | 100 | 30 | 30 |
| Baltimore Elec. Pfd. | 100 | 41½ | 42 |
| Con. Cotton Duck Common | 50 | 3 | 5 |
| Con. Gas, Elec. Lt. & P. Com. | 100 | 90 | 90½ |
| Con. Gas, Elec. Lt. & P. Pfd. | 100 | 96 | 96 |
| Consolidation Coal | 100 | 102½ | 106 |
| G. B. S. Brewing Co. | 100 | 1 | 1½ |
| Mer. & Miners' Trans. Co. | 100 | 72 | 74½ |

| Railroad Bonds. | Par. | Bid. | Asked. |
|---------------------------------|------|------|--------|
| Atlantic Coast 1st 4s | 100 | 95 | 96 |
| Atlantic Coast Conv. Deben. 4s | 100 | 97 | 97 |
| At. Coast (Conn.) 4s, Cfs. | 100 | 92 | 94 |
| Atlantic Coast (Conn.) 5s, Cfs. | 100 | 104 | 104 |
| Atlantic Coast (S. C.) 4s | 100 | 97 | 97 |
| Baltimore & Harrisburg 5s | 100 | 109 | 109 |
| Carolina Central 4s | 100 | 91½ | 92½ |
| Charleston & West. Car. 5s | 100 | 106 | 106 |
| Coal & Coke Railway 5s | 100 | 93 | 93 |
| Coal & Iron Railway 5s | 100 | 101½ | 101½ |
| Col. & Green, 1st 6s | 100 | 107½ | 107½ |
| Florida & Southern 4s | 100 | 91½ | 91½ |
| Georgia & Alabama 5s | 100 | 105½ | 105½ |
| Georgia & Florida 5s | 100 | 80½ | 80½ |
| Georgia, Car. & North, 1st 5s | 100 | 105½ | 105½ |
| Georgia Southern & Fla. 1st 5s | 100 | 106 | 106 |
| Macon, Dublin & Savannah 5s | 100 | 97½ | 97½ |
| Maryland & Pennsylvania 4s | 100 | 91½ | 91½ |
| Savannah, Fla. & West. 5s | 100 | 124½ | 124½ |
| Savannah, Fla. & West. 6s | 100 | 87½ | 87½ |
| Seaboard Air Line 4s | 100 | 86½ | 87 |
| Seaboard 4s, Stamped | 100 | 78½ | 78½ |
| Seaboard Adjustment 5s | 100 | 78½ | 78½ |
| Seaboard 10-year 5s | 100 | 100 | 100 |
| Seaboard & Roanoke 5s | 100 | 108 | 108 |
| Seaboard & Roanoke 6s | 100 | 105 | 105 |
| South Bound 5s | 100 | 106 | 106 |
| Suffolk & Carolina 4s | 100 | 101 | 101 |
| Western Maryland 4s | 100 | 86 | 86½ |
| West Virginia Central 1st 5s | 100 | 100½ | 100½ |
| Wilmington & Weldon 4s | 100 | 96 | 97½ |
| Wilmington & Weldon 5s | 100 | 110½ | 110½ |
| Washington & Vandemere 4½s | 100 | 94½ | 94½ |

| Street Railway Bonds. | Par. | Bid. | Asked. |
|---------------------------------|------|------|--------|
| Anacostia & Potomac 5s | 100½ | 101 | 101 |
| Anacostia & Potomac 5s, Gtd. | 102½ | 103 | 103 |
| Atlanta Con. Street Railway 5s | 105 | 105 | 105 |
| Augusta Railway & Electric 5s | 101½ | 101½ | 101½ |
| Baltimore City Passenger 5s | 100½ | 100 | 100 |
| Baltimore City Passenger 4½s | 100 | 96½ | 97 |
| Baltimore, Sp. Pt. & C. 4½s | 100 | 96 | 107½ |
| Charleston Con. Electric 5s | 100 | 96 | 96 |
| City & Suburban 5s (Wash.) | 101½ | 101½ | 101½ |
| Fairmont & Clarksburg Trac. 5s | 98½ | 99½ | 99½ |
| Lake Roland Elevated 5s | 109½ | 109½ | 109½ |
| Lexington Railway 1st 5s | 87½ | 87½ | 87½ |
| Macon Railway & Light 5s | 96½ | 97 | 97 |
| Maryland Electric Railways 5s | 98 | 98½ | 98½ |
| Memphis Street Railway 5s | 97 | 97½ | 97½ |
| Newport News & Old Pt. G. M. 5s | 64 | 64 | 64 |
| Norfolk & Portsmouth Trac. 5s | 87½ | 89 | 89 |
| Norfolk Railway & Light 5s | 90½ | 90½ | 90½ |
| Norfolk Street Railway 5s | 90½ | 90½ | 90½ |
| Norfolk & Atlantic Terminal 5s | 91 | 92½ | 92½ |
| Richmond Traction 5s | 104½ | 105 | 105 |
| United Railways 1st 4s | 84½ | 84½ | 84½ |
| United Railways Income 4s | 64½ | 64½ | 64½ |
| United Railways Funding 5s | 86 | 86 | 86 |
| Virginia Railways P. 5s | 96½ | 97 | 97 |
| Virginia Elec. Ry. & D. 5s | 104 | 104 | 104 |

| Miscellaneous Bonds. | Par. | Bid. | Asked. |
|----------------------------------|------|------|--------|
| Ala. Con. Coal & Iron 5s | 85½ | 86½ | 86½ |
| Baltimore Brick 5s | 82 | 83 | 83 |
| Baltimore Electric 5s, Stp. | 94½ | 95 | 95 |
| Consolidated Gas 5s | 108½ | 109 | 109 |
| Consolidated Gas 4½s | 88½ | 87 | 87 |
| Con. Gas, Elec. Lt. & P. 4½s | 88½ | 88½ | 88½ |
| Con. Gas, Elec. Lt. & P. Notes | 100 | 100 | 100 |
| Consolidation Coal Ref. 4½s | 94 | 94 | 94 |
| Fairmont Coal 1st 5s | 97 | 97½ | 97½ |
| G. B. S. Brewing 1st 4s | 44½ | 44½ | 44½ |
| Mt. Vernon-Woodbury Cot. Duck 5s | 74½ | 74½ | 74½ |
| United Elec. Lt. & P. 4½s | 92½ | 94 | 94 |

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending April 24.

| | Bid. | Asked. |
|----------------------------------|------|--------|
| Abbeville Cotton Mills (S. C.) | 80 | 75 |
| Aiken Mfg. Co. (S. C.) | 100 | 100 |
| American Spinning Co. (S. C.) | 100 | 100 |
| Anderson Cotton Mills (S. C.) | 48 | 48 |
| Anderson Cot. Mills (S. C.) Pfd. | 100 | 100 |
| Aradilla Mills (S. C.) | 98 | 98 |
| Arkwright Cotton Mills (S. C.) | 99 | 100 |
| Augusta Factory (Ga.) | 40 | 40 |
| Avondale Mills (Ala.) | 116 | 116 |
| Belton Mills (S. C.) | 130 | 138 |

| | | |
|--------------------------------------|-----|-----|
| Brandon Mills (S. C.) | 95 | 108 |
| Brogton Mills (S. C.) | 90 | 90 |
| Cannon Mfg. Co. (N. C.) | 135 | 135 |
| Cabarrus Cotton Mills (N. C.) | 130 | 135 |
| Chadwick Mfg. Co. (N. C.) Pfd. | 100 | 100 |
| Chilquola Mfg. Co. (S. C.) | 170 | 170 |
| Clifton Mfg. Co. (S. C.) | 85 | 85 |
| Clinton Cotton Mills (S. C.) | 120 | 120 |
| Columbus Mfg. Co. (Ga.) | 93 | 98 |
| Courtney Mfg. Co. (S. C.) | 100 | 100 |
| Dallas Mfg. Co. (Ala.) | 99 | 99 |
| Darlington Mfg. Co. (S. C.) | 80 | 80 |
| D. E. Converse Co. (S. C.) | 90 | 90 |
| Drayton Mills (S. C.) | 95 | 95 |
| Eagle & Phenix Mills (Ga.) | 117 | 117 |
| Eastley Cotton Mills (S. C.) | 165 | 175 |
| Enoree Mfg. Co. (S. C.) | 50 | 65 |
| Enoree Mfg. Co. (S. C.) Pfd. | 95 | 100 |
| Enterprise Mfg. Co. (Ga.) | 65 | 75 |
| Exposition Cotton Mills (Ga.) | 200 | 200 |
| Gaffney Mfg. Co. (S. C.) | 90 | 72 |
| Gainesville Cotton Mills (Ga.) | 72 | 80 |
| Greenwood Cotton Mills (S. C.) | 150 | 150 |
| Gluck Mills (S. C.) | 102 | 105 |
| Hammer Cotton Mills (S. C.) 1st Pfd. | 130 | 130 |
| Graniteville Mfg. Co. (S. C.) | 140 | 145 |
| Greenwood Cotton Mills (S. C.) | 57 | 60 |
| Grondel Mills (S. C.) | 90 | 103 |
| Hartsville Cotton Mill (S. C.) | 160 | 175 |
| Henrietta Mills (N. C.) | 160 | 175 |
| Inman Mills (S. C.) | 100 | 103 |
| King Mfg. Co., J. P. (Ga.) | 80 | 85 |
| Lancaster Cotton Mills (S. C.) | 130 | 130 |
| Lancaster Cot. Mills (S. C.) Pfd. | 97 | 100 |
| Langley Mfg. Co. (S. C.) | 104 | 112 |
| Laurens Mills (S. C.) | 127 | 135 |
| Limestone Mills (S. C.) | 155 | 160 |
| Lockhart Mills (S. C.) | 68 | 68 |
| Lockhart Mills (S. C.) Pfd. | 90 | 100 |
| Loray Cotton Mills (N. C.) Pfd. | 95 | 97½ |
| Mariboro Cotton Mills (S. C.) | 80 | 80 |
| Mills Mfg. Co. (S. C.) | 102 | 102 |
| Molloy Mfg. Co. (S. C.) | 95 | 105 |
| Monaghan Mills (S. C.) | 100 | 100 |
| Monarch Cotton Mills (S. C.) | 105 | 105 |
| Newberry Cotton Mills (S. C.) | 125 | 130 |
| Ninety-Six Cotton Mills (S. C.) | 130 | 150 |
| Norris Cotton Mills (S. C.) | 121 | 130 |
| Olympia Cotton Mills (S. C.) | 90 | 90 |
| Orr Cotton Mills (S. C.) | 95 | 95 |
| Pacolet Mfg. Co. (S. C.) | 90 | 90 |
| Pacolet Mfg. Co. (S. C.) Pfd. | 95 | 100 |
| Pelzer Mfg. Co. (S. C.) | 169 | 169 |
| Piedmont Mfg. Co. (S. C.) | 175 | 177 |
| Poe Mfg. Co., F. W. (S. C.) | 110 | 125 |
| Saxon Mills (S. C.) | 130 | 130 |
| Sibley Mfg. Co. (Ga.) | 65 | 68 |
| Spartan Mills (S. C.) | 125 | 132 |
| Triton Mfg. Co. (Ga.) | 130 | 130 |
| Tucapau Mills (S. C.) | 310 | 350 |
| Union-Buffalo (S. C.) 1st Pfd. | 74 | 80 |
| Union-Buffalo (S. C.) 2d Pfd. | 16 | 16 |
| Victor Mfg. Co. (S. C.) | 110 | 115 |
| Warren Mfg. Co. (S. C.) | 90 | 95 |
| Warren Mfg. Co. (S. C.) Pfd. | 100 | 105 |
| Washington Mills (Va.) | 28 | 28 |
| Washington Mills (Va.) Pfd. | 106 | 110 |
| Whitney Mfg. Co. (S. C.) | 130 | 135 |
| Wicnoff Mills (N. C.) | 135 | 135 |
| Woodruff Cotton Mills (S. C.) | 110 | 118 |
| Woodside Cotton Mills (S. C.) | 95 | 100 |
| Watts Mills (S. C.) | 80 | 90 |
| Williamston Mills (S. C.) | 120 | 125 |

Morgan Buys Two Bond Issues.

A report from New York says that J. P. Morgan & Co. have bought \$10,000,000 4 per cent. bonds of the Louisville & Nashville Railroad Co., secured by a first mortgage on the Atlanta, Knoxville & Cincinnati division. They have also taken \$3,000,000 bonds of the Atlantic Coast Line.

FINANCIAL CORPORATIONS.

Ala., Foley.—Official: A new bank has been chartered and incorporated with \$15,000 capital, and business is expected to begin May 1; J. B. Foley, 319 W. Ohio St., Chicago, Ill., president; J. C. Lehr, cashier, and Frank Fesslee, vice-president.

Ark., Kingston.—A new bank,

begin business June 1 with Dr. J. M. Page president and A. P. Hilton cashier.

Ga., Macon.—Official: The Atlas Finance Corporation chartered; capital \$250,000. Business is to begin June 1 with J. F. Mercer, president; C. M. Hitch, vice-president and secretary; and A. O. Self, fiscal agent.

Ga., Nashville.—Official: The Empire Loan & Investment Co. chartered; capital \$50,000. Business is to begin May 1 with J. W. E. Powell president, J. D. Lovett vice-president and W. R. Smith secretary and treasurer.

Ga., Sylva.—Official: The Sylva Banking Co. chartered; capital \$25,000. J. H. Evans, president; P. R. Kittles, vice-president; I. J. Evans, attorney; directors, W. A. Mallory, J. A. Davis, A. Zeigler, T. A. Mock, W. L. Brantly, A. R. Roberts, P. R. Kittles and J. H. Evans.

Ga., Tifton.—Official: The Georgia Loan & Investment Co. has filed application for incorporation; capital \$250,000; incorporators, R. D. Smith, E. C. Daniel and W. M. Giddins. Business is to begin at once.

Ga., Union Point.—The Bank of Union Point is reported to have filed articles of incorporation; capital \$40,000; incorporators, J. J. Wilkins of Athens, Sam H. Sibley, J. E. Carlton, Horace Lamb and J. Hart Sibley of Union Point.

Ky., Whitesburg.—The First National Bank of Whitesburg, capital \$25,000, will, it is reported, begin business June 1. V. H. Fuller of Stanton, is among those interested.

La., Bogalusa.—The Commercial Bank of North Bogalusa is reported organized with \$25,000 capital, and business is expected to begin about June 1. Among the stockholders are H. D. Bleckham of Hackley, La., and W. W. Babington of Franklinton, La. L. L. Richardson, Jr., it is stated, will be cashier.

La., Jennings.—The Jennings Land, Title & Guaranty Co. is reported organized with \$10,000 capital. B. A. Richards, president; S. L. Cary, vice-president; J. O. Modisette, secretary, and J. H. Heinen, treasurer.

La., New Orleans.—The Commercial National Fire Insurance Co. is reported organized with \$500,000 capital and a net surplus of \$250,000. T. T. Crawford, H. F. Owsley and others are interested. Offices are in the People's Bank Bldg.

Md., Baltimore.—The Second National Life Insurance Co. incorporated; capital \$1,000,000. Incorporators, R. Bennett Darnall, Charles F. Yeager and Charles C. Wallace.

Miss., Gulfport.—The Gulfport Life Insurance Co. has, according to press dispatches, been organized with \$500,000 capital. M. T. Bouslog of Gulfport, president; W. E. Carpenter of Duck Hill (Miss.), vice-president; S. A. Tomlinson of Gulfport, treasurer. Others interested are W. N. Driver, manager the Great Southern Hotel; D. W. Milner, Geo. W. Northrop, A. H. Covington, G. Lewis Ross of New Orleans, T. J. Keller, J. P. Howit and C. L. Causey. Business will be started immediately.

Mo., Sedalia.—The American Exchange Bank will, it is reported, begin business April 29 with \$50,000 capital. Officers, W. S. Sneed, president; E. M. Stafford, first vice-president; E. W. Shultz, second vice-president; W. W. Barrett, cashier; E. R. Barrett, assistant cashier.

Mo., Tower Grove, P. O. St. Louis.—The Tower Grove Bank is reported being organized with \$100,000 capital and \$10,000 surplus; organizers, John Schmoll, J. L. Hornsby, C. G. Besch, Joseph Dickson, Jr., John T. Fitzsimmons, Dr. A. H. Hamel, J. J. Kleekamp, D. C. Kerckhoff, George A. Kerckhoff, C. A. Lemp, A. R. Schollmeyer, G. H. Schollmeyer, C. F. Starck and A. Urquhart.

N. C., Lillington.—The Harnett Realty Loan & Insurance Co., authorized capital \$50,000, is reported organized by E. S. Smith, F. H. Taylor, D. Godfrey, John H. Knight, J. M. Shaw, Parker Bros. & Johnson, and J. N. Fuquay.

N. C., Raeford.—The Hoke Realty, Loan & Trust Co. is reported chartered with \$50,000 capital by J. W. Moore of Raeford, Greensboro Securities Co. of Greensboro, W. J. Upchurch, J. W. McLaughlin and others of Raeford.

N. C., Salisbury.—A movement is reported under way to organize a new bank.

Okla., Canadian.—The First National Bank is reported chartered; capital \$25,000. E. C. Milon, president; A. U. Thomas, vice-president, and F. G. Gillock, cashier.

Okla., Claremore.—The Claremore Building & Loan Association is reported chartered; capital \$100,000. Directors, W. P. Johnson, Earl C. Bayless, E. D. Myers, Leo A. Moore, G. O. Bayless, G. D. Davis, W. D. McClure, James M. Scott, John T. Ezzard, C. B. Holtsendorff and Ross E. Hicks.

Okla., Clinton.—Official: The Oklahoma State National Bank chartered; capital \$25,000. Business began April 12 with directors

thus: J. W. McNeal, president; E. J. Murphy, vice-president; Chas. W. Brewer, cashier; W. J. Aycock, T. J. Nance and Cy. Howenstine. The new concern takes over the Oklahoma State Bank.

Okla., Delaware.—Official: The Citizens' State Bank chartered; capital \$15,000; B. F. DeVan, president; P. S. Powell, vice-president; Geo. F. English, cashier. Business began April 11.

Okla., Kingston.—The First State Bank, capital \$15,000, is reported organized with J. T. H. Lipscomb of San Antonio, president; E. H. Colter of Kingston, vice-president, and C. B. Williams of Ardmore, cashier.

Okla., Oklahoma City.—The Home Building & Trust Co., capital \$25,000, is reported chartered. Directors, James B. Thomas, Roy N. Cunningham and R. M. White.

Okla., Oklahoma City.—The Oklahoma City Loan & Investment Co. is reported organized with \$100,000 capital; directors, N. N. Gatlin, president; R. R. Bell, vice-president; B. S. Chandler, secretary-treasurer; J. B. Taylor of Oklahoma City and R. B. Ferris of Butler. Offices will be opened about May 1 at 118 N. Robinson Ave.

Okla., Sentinel.—The First National Bank is reported chartered; capital \$25,000; Alva J. Niles, president; J. W. McNeil and E. D. Foster, vice-presidents, and J. W. Lambright, cashier.

Okla., Shattuck.—Official: The Shattuck National Bank, which is a conversion, is chartered with \$30,000 capital. Business began April 13 with J. H. Stuart, W. E. Stuart, J. L. Stuart, R. S. Oates and P. E. Bigelow.

Okla., Valliant.—The First National Bank, chartered with \$25,000 capital, has the following officers: J. M. Cecil, president; A. J. Whitefield, vice-president; W. E. Watkins, cashier; L. V. Hackworth, assistant cashier.

S. C., Darlington.—The Carolina National Bank, which is a conversion of the County Savings Bank of Darlington, is reported chartered; capital \$50,000. C. B. Edwards is president; T. P. Rhodes, vice-president, and I. T. Walling, cashier.

S. C., Greenville.—The Realty Trust Co., capital \$100,000, is reported chartered. Officers, W. St. Julian Arnette, president; W. C. Cleveland, vice-president; H. B. Tindal, second vice-president; J. H. Williams, secretary-treasurer.

S. C., Pageland.—Official: The Pageland Insurance & Realty Co. incorporated; capital \$10,000; L. L. Parker, president; B. H. Plakeney, vice-president, and H. N. Askins, secretary and treasurer. Business began April 13.

S. C., Saluda.—Official: The South Carolina Guaranty Co. incorporated; capital \$50,000; incorporators, M. T. Pitts, B. Frank Forrest, Eugene W. Able and G. C. Wheeler. Business is expected to begin about July 1.

Tenn., Nashville.—Official: The Federal Life & Casualty Co. is incorporated under a charter; capital \$500,000; directors, W. F. Hunt, president; E. D. Love, first vice-president; E. M. Kelly, second vice-president; H. H. Hannah, third vice-president; A. P. Foster, secretary; J. C. Collins, treasurer; Wm. Hume, Jr., general counsel; B. W. Montgomery, R. M. Burns, W. E. Metzger, B. B. Coffey, I. T. Rhea, J. H. Hill, W. J. Danley, W. H. White and W. E. Walker. Business will begin as soon as \$100,000 of stock has been paid in.

Tenn., Nashville.—The Real Estate Bank & Trust Co., capital \$300,000, will, it is reported, begin business May 1 in the Stahlman Bldg. with L. M. Jackson, president; George A. Karsch, vice-president, and M. C. Cayce, cashier.

Tex., Buffalo.—Official: The Farmers' State Bank incorporated; capital \$30,000; organizers, J. A. Springfield, president; Edell Stevens, cashier; D. C. Dove and Barney Pearstone of Buffalo, and M. Lasker of Galveston, Tex.

Tex., Frantitas.—Official: First State Bank of Frantitas chartered; capital \$10,000. Directors, G. J. Phelps, president; F. T. Dimick, cashier; A. P. Ward, W. K. Rose and Wm. Clark.

Tex., Quanah.—The Quanah Securities Co. is reported incorporated with \$10,000 capital by R. F. Hughes, J. C. Marshall, C. A. Rogers and others.

Tex., McLade.—The Guaranty State Bank is reported incorporated; capital \$10,000. Incorporators, E. F. Brown, C. L. Test, R. L. Collier and others.

Tex., Paris.—The Guaranty Bank & Trust Co., capital \$50,000, will, it is reported, begin business about May 1 with Worth Duncan as president and Sam M. Henderson cashier.

Tex., San Antonio.—Official: The Texas

Land & Trust Co., capital \$5,000,000, surplus \$2,500,000, is in process of organization; incorporators, Nat M. Washer, N. S. Graham, Judge Chas. W. Ogden, J. H. Savage, W. W. Collier, Dr. Robt. E. Moss, Judge S. J. Brooks, Dr. J. M. Strayhorn, A. L. Slaughter, J. C. Bland, F. L. Pudig, O. H. Lutz of San Antonio, and J. H. Whyte and Thos. F. Cunningham of New Orleans, La. Fiscal agents, Slaughter, Pudig & Co. Offices of the company are at 308 and 310 Washer Bldg. Business is expected to begin about September 1.

Va., Bristol.—The National Loan Co. is reported incorporated with from \$5000 to \$10,000 capital. Officers, H. J. Simon, president; B. L. Osborne, vice-president, and J. W. Eakle, secretary and treasurer.

Va., Tazewell.—The Virginia Realty Loan Co. is reported incorporated with \$10,000 capital. Incorporators, F. M. Peters, president, Bluefield, W. Va.; R. M. Garrett, Jr., vice-president, Bluefield, W. Va.; J. R. Laird, manager, Tazewell, Va.

W. Va., Huntington.—The Cabell Loan Co., authorized capital \$10,000, is reported incorporated by L. Kelner, Rose Kelner, William Chaffin, May Chaffin and W. B. Chaffin.

NEW SECURITIES.

Ala., Huntsville.—May 1. It is reported, an election is to be held to vote on \$100,000 of 5 per cent. 20-30-year city hall and public-office construction bonds.

Ala., Mobile.—The City Bank & Trust Co. of Mobile is reported to have been awarded at \$176,025 the \$169,000 of 5 per cent. Mobile county refunding bonds.

Ala., Oxford.—May 22, it is reported, an election is to be held to vote on \$12,000 of sewerage bonds.

Ark., Humphrey.—Press dispatches state that \$10,000 of 6 per cent. bonds of special school district of Humphrey are being offered for sale. Address J. K. Anthony, Secretary.

Fla., Arcadia.—An official letter confirms report that the \$40,000 of school bonds voted last year have been repealed, that \$20,000 of water-works extension, \$20,000 of sewerage system and \$10,000 of street improvement 5 per cent. bonds will be issued; E. F. Childers is Mayor.

Fla., Jasper.—Official: Voted: \$10,000 of sewerage, \$2500 of city hall, \$17,500 of streets and sidewalks 5 per cent. 30-year bonds; denomination \$1000; H. S. Caldwell, Mayor; C. W. Smith, president City Council; J. W. Register, W. H. Greene and W. S. Murrow, bond trustees.

Fla., South Jacksonville.—Reported voted: \$20,000 of electric-light and water-works bonds; R. O. Moore, W. W. Swain, W. D. Alford, J. A. Snider and A. C. Macy, bond trustees.

Ga., Americus.—Official: Bids will be received until 7 P. M. May 16 by the Mayor and City Council for \$40,000 of 4 per cent. street-paving, \$40,000 of sewerage and \$25,000 of water-works 4½ per cent. bonds. Lee Allen is chairman finance committee.

Ga., Ashburn.—Reported that an election will soon be held to vote on \$20,000 of water and sewerage bonds.

Ga., Barnesville.—Reported voted: \$35,000 of Gordon Institute and \$15,000 of electric-light, water and sewerage bonds.

Ga., Colquitt.—Reported that bids will be received until May 1 by S. M. Watson, City Clerk, for \$22,000 of 5 per cent. 30-year bonds.

Ga., Macon.—Press dispatches state that \$200,000 of water-works bonds have been validated and will be offered for sale at an early date.

Ga., Oglethorpe.—Official: Voted: \$18,000 of water and light bonds; denomination \$500. Address J. P. Nelson.

Ga., Perry.—The Grand Jury of Houston county is reported to have recommended holding an election as early as possible to vote on \$100,000 of road and bridge bonds.

Ga., Swainsboro.—Official: Voted: \$40,000 of water and light bonds.

Ky., Brooksville.—Reported that an election is to be held in Bracken county to vote on \$35,000 of courthouse and \$25,000 of turnpike bonds.

Ky., Lagrange.—Bids will be received until May 1, it is reported, by R. O. Duncan, secretary Board of Education, for \$12,500 of 5 per cent. 1-20-year building bonds; denomination \$100.

Ky., Lexington.—Press dispatches state that \$4500 of 4 per cent. 40-year Woodland Park and Auditorium bonds have been purchased by a local bank.

Ky., Nicholasville.—Reported that an election is to be held to vote on \$15,000 of school bonds.

Ky., Russell.—Press dispatches state that bids will be received until May 8 for \$25,000 of 6 per cent. 20-year water-works bonds; denomination \$500. All bids received April 17 were rejected.

La., Franklin.—Reported voted: \$40,000 of 40-year Franklin drainage district bonds.

La., Jena.—An official letter says that school bonds will not be put on the market until probably about May 15.

La., Shreveport.—Official: Bids will be received until 10 A. M. May 9 for \$250,000 of 4½ per cent. public improvement bonds; dated May 1, 1911; denomination \$1000. Address L. H. Baker, Secretary-Treasurer.

Md., Easton.—Press dispatches state that no satisfactory bids were received April 15 for the \$40,000 of 4 per cent. 1-40-year sanitary sewer bonds. Martin M. Higgins is Mayor.

Md., Towson.—The Susquehanna Transmission Co. of Maryland has, it is reported, filed a mortgage deed of trust with the Knickerbocker Trust Co. of New York, trustee, to secure an issue of \$2,500,000 of 5 per cent. bonds.

Md., Towson.—The Baltimore Suburban Sewerage Co. has filed a mortgage deed of trust with the Fidelity Trust Co., trustees, to secure an issue of \$400,000 of 6 per cent. 20-year bonds; denomination \$1000.

Md., Upper Marlboro.—Reported that at noon May 2 Frederick Sasseer, secretary-treasurer and county superintendent, will offer at public auction \$8000 of 5 per cent. 30-year Prince George's county high-school building bonds.

Miss., Aberdeen.—Bids will be received until 2 P. M. May 1 for \$100,000 of 5 per cent. 25-year Monroe county road bonds. C. P. Smith is clerk Board of Supervisors.

Miss., Aberdeen.—Official: Bids will be received until 8:30 P. M. June 7 for \$20,000 of city hall and \$5000 of negro high-school bonds, same being part of an authorized \$50,000 issue; denomination \$1000; dated July 1, 1911; maturity July 1, 1931. Address J. M. Asher, Mayor.

Miss., Amory.—Official: Voted April 11: \$85,000 of 20-year water-works and sewerage bonds; interest not to exceed 5½ per cent. Bids for same will be asked May 2. E. C. Dairymple is City Clerk.

Miss., Bassfield.—Bids will be received until 1 P. M. May 5 for \$6200 of 6 per cent. water-works bonds. Address Xavier A. Kramer of Magnolia, Miss., Village Engineer, or J. P. Dear, Village Clerk.

Miss., Bay St. Louis.—Official: Bids will be opened May 1 for \$25,000 of 6 per cent. 5-20-year Hancock county road and bridge bonds; denomination \$500; dated January 1, 1911; maturity January 1, 1931. Address Board of Supervisors, E. H. Hoffman, clerk.

Miss., Iuka.—Official: First Supervisors' District, Tishomingo county, has voted 6 per cent. 20-year road bonds. Address P. W. Patterson. Ben C. Pace is clerk.

Miss., Mahan.—A special election will probably soon be held to vote on \$10,000 of school bonds.

Miss., McComb.—J. D. Harrell, City Clerk, will, it is reported, receive bids until 8 P. M. May 16 for \$15,000 of 5 per cent. 20-year water-works improvement bonds.

Mo., Clarence.—E. M. Harness, secretary Board of Education, will, it is reported, receive bids until 6 P. M. May 10 for \$25,000 of 5 per cent. 20-year school-building bonds; denomination \$500.

Mo., De Soto.—Official: The Wm. R. Compton Company of St. Louis has purchased the \$25,000 of special road-district bonds. W. A. Welch is clerk of De Soto Special Road District.

Mo., Kansas City.—H. P. Wright & Co. is reported to have purchased at par \$50,000 of 4 per cent. Kansas City school bonds.

Mo., Lexington.—The W. R. Compton Bond & Mortgage Co. of St. Louis is reported to have purchased at par \$125,000 of 5½ per cent. 15-year special road district bonds.

Mo., Mexico.—Official: Bids will be received until May 29 by the Noble-Barnes Company, treasurer, for \$15,000 of 5 per cent. 1-5-year Audrian county poorhouse bonds; denomination \$500. J. B. Graham is county Clerk.

Mo., Monett.—The Mercantile Trust Co. of St. Louis, according to press dispatches, has purchased \$35,000 of municipal electric-light bonds.

Mo., Springfield.—Reported voted: \$150,000 of Greene county courthouse bonds.

Mo., St. Charles.—April 29, it is reported, an election is to be held to vote on \$30,000 of municipal water-works improvement bonds.

Mo., Tarkio.—Reported that bids will be received until 8 P. M. May 15 for \$25,000 of

5 per cent. high-school bonds. J. A. Gerlach is secretary of the School Board.

Mo., Webster Groves.—Official: Bids will be received until May 4 for \$28,000 of 4½ per cent. 10-20-year school site, building and funding bonds. Address F. B. Miller, secretary board of directors of Webster Groves school district.

N. C., Asheville.—Official: Bids will be received until noon May 22 for \$430,000 of 4½ and 5 per cent. 30-year refunding bonds. John A. Campbell is Mayor.

N. C., Ayden.—Bids will be received until noon June 1 for \$12,000 of 5 per cent. 30-year school-building bonds; denomination \$500. Address J. F. Barwick, Mayor.

N. C., Concord.—The Western-German Bank, Cincinnati, is reported to have purchased at \$565 premium and accrued interest \$50,000 of water bonds.

N. C., Lenoir.—Bids were received until April 25 for \$37,500 of 5 per cent. 20-year municipal bonds. Address M. L. John, Mayor.

N. C., Marble.—Official: Bids will be received until June 1 for \$12,000 of 5 per cent. 30-year Cherokee county highway bonds. Address J. M. Kilpatrick, secretary Highway Commission of Marble Road District.

Okla., Eldorado.—Official: The Greer Bond & Investment Co. of Mangum, Okla., has purchased \$15,000 of 6 per cent. 25-year water-works bonds. C. B. Hallman is Town Clerk.

Okla., Kingfisher.—Reported that bids will be received until April 28 by Earl Worl, City Clerk, for \$23,000 of water-works bonds.

Okla., McAlester.—Official: Authorized: \$80,000 of 5 per cent. water-works-extension bonds; maturity 1936. J. M. Gannaway is City Clerk.

Okla., Muskogee.—Official: Bids will be opened May 1 for \$175,000 of 5 per cent. 25-year school bonds; denomination \$1000. Address C. J. Eddy, Clerk.

Okla., Oklahoma City.—May 9, it is reported, an election is to be held to vote on \$165,000 of school-building bonds.

Okla., Okmulgee.—Reported voted: \$7000 of school bonds.

Okla., Perry.—R. J. Edwards of Oklahoma City is reported to have been awarded at par \$30,000 of 5 per cent. 20-year high-school building and equipment bonds.

Okla., Soper.—Official: Voted: \$12,000 of 6 per cent. 25-year water-works bonds; denomination \$100. Address H. Hughes.

Okla., Vian.—Reported voted: \$20,000 of 6 per cent. 25-year water-works bonds.

S. C., Greenville.—Regarding reported issue of bonds by Greenville county, J. R. Childress, Clerk, writes: "Nothing doing as to the county this year."

S. C., St. Matthews.—Official: Voted April 12: \$30,000 of 6 per cent. 20-40-year bonds for public buildings for Calhoun county; denominations: \$18,000 of \$50 and \$2000 of \$100. Address M. M. Mann, attorney-at-law, with office in Banks & Wimberly Bldg., or J. S. Wannamaker, Mayor, St. Matthews. Press dispatches state that bids for the bonds will be received until July 1.

S. C., Turbeville.—Official: It is proposed to issue bonds for school building.

S. C., Varnville.—Official: Bids will be received until noon May 15 for \$7000 of 6 per cent. 20-year school bonds. Address Randolph Murchough, attorney-at-law, Hampton, S. C.

Tenn., Binghampton.—Press dispatches state that the Bank of Commerce & Trust Co., Memphis, Tenn., has purchased \$30,000 of high-school bonds. It is also stated that \$30,000 of sewer, sidewalk and street bonds will soon be offered.

Tenn., Chattanooga.—Official: Bids will be received until 3 P. M. May 17 for \$81,000 of 20-year 4½ per cent. refunding bonds. Address T. C. Thompson, Mayor.

Tenn., Gallatin.—Reported that an ordinance has been passed by the Board of Aldermen providing for an issue of \$10,000 of water-works and electric-light-plant improvement bonds.

Tenn., Knoxville.—Official: Bids will be received until noon May 10 for \$36,000 of 5 per cent. 20-year Knox county high-school bonds; denomination \$500. Address John W. Drummond, County Judge.

Tenn., Manchester.—Official: Voted March 9: \$25,000 of 20-year electric-light plant and water-works bonds; interest not to exceed 6 per cent.; denomination \$100. E. W. Smartt, Jr., is Mayor.

Tenn., Maryville.—Official: Bids will be received by T. F. Cooper, chairman Pike Commission, until 1 P. M. May 15 for \$300,000 of 5 per cent. 10-40-year Blount county road bonds.

Tenn., McMinnville.—May 6, it is reported,

an election is to be held to vote on \$100,000 of Warren county pipe bonds.

Tenn., Memphis.—The Senate has passed a bill authorizing an issue of \$1,000,000 of bonds for municipal light plant.

Tenn., Morristown.—A bill is reported passed by the Legislature authorizing Hamblen county to issue \$10,000 of interest-bearing warrants to take care of the outstanding indebtedness against Hamblen county.

Tenn., Mountain View.—Cutter, May & Co. of Chicago are reported to have purchased \$10,000 of 5½ per cent. 30-year street-improvement bonds at par. J. N. Moore is Mayor.

Tenn., Nashville.—Official: Seasongood & Mayer, Cincinnati, O., has been awarded at \$35.25 premium \$80,000 of bonds for Davidson county agricultural and industrial normal school for negroes. W. M. Pollard is County Judge.

Tenn., Shelbyville.—Press dispatches state that \$25,000 of 5 per cent. Shelby county bonds are to be issued in May.

Tenn., Park City, P. O. Knoxville.—Reported that bids will be opened May 20 for \$25,000 of bonds as follows: \$15,000 for street work and \$10,000 for paying off floating indebtedness.

Tenn., South Pittsburg.—Official: \$40,000 of 5 per cent. 10-30-year public building bonds are to be issued. Address W. M. Cameron, recorder.

Tenn., Tullahoma.—Reported that an election is to be held to vote on \$25,000 of sewerage bonds.

Tex., Anahuac.—Press dispatches state that an election is to be held June 10 to vote on courthouse and jail bonds.

Tex., Aspermont.—Official: Voted: \$50,000 of 5 per cent. 40-year Stonewall county courthouse bonds; denomination \$1000; dated May, 1911. R. S. Tillotson is County Clerk.

Tex., Austin.—The Attorney-General has approved the following bonds: \$100,000 of 5 per cent. Jackson county road and bridge bonds; \$18,000 of 4½ per cent. 5-40-year Burnet county bridge bonds; \$10,000 of 5 per cent. 20-40-year Canadian street-improvement bonds; \$30,000 of 5 per cent. 20-40-year Bridgeport independent school district schoolhouse bonds; \$100,000 of 5 per cent. 20-year district No. 3 and \$25,000 of 5 per cent. district No. 2 Hardin county road bonds; \$800 of 5 per cent. 5-20-year Brown county common school district No. 28 bonds; \$500,000 of Houston viaduct bonds; \$100,000 of 5 per cent. 40-year bonds of Nolan county road district No. 1; \$40,000 of 5 per cent. 30-40-year Harlingen independent school district bonds; \$25,000 of 4 per cent. 5-40-year Llano county bridge bonds; \$1000 of 5 per cent. 5-20-year Leon county common school district bonds; \$500 of 5 per cent. 5-10-year bonds of Holly school district No. 22.

Tex., Brady.—Voted: \$75,000 of road and \$40,000 of water bonds. S. A. Conley is Mayor.

Tex., Brenham.—A letter to the Manufacturers Record denies report that Wesley district, Washington county, will issue bonds.

Tex., Brenham.—Reported that on May 13 Prairie Hill school district, Washington county, will vote on school bonds.

Tex., Caldwell.—May 23, it is reported, an election is to be held to vote on \$6000 of bonds for erecting new steel staidpole.

Tex., Calvert.—Reported defeated: \$25,000 of city hall bonds.

Tex., Cedar Bayou.—Reported voted: \$8000 of school-building bonds.

Tex., Collegeport.—May 12, it is reported, an election is to be held in Collegeport school district to vote on \$12,000 of school-building bonds.

Tex., Cuero.—An election is to be held May 22, it is reported, to vote on \$10,000 of school-building bonds.

Tex., Dayton.—May 23, it is reported, an election is to be held to vote on \$275,000 of road bonds of Dayton precinct, Liberty county.

Tex., Farmersville.—Bids are reported being received for \$10,000 of 5 per cent. 20-25-year street-improvement bonds.

Tex., Fort Stockton.—The question of holding an election to vote on city hall building bonds is reported under consideration.

Tex., Garrison.—Bids will be received until 10 A. M. May 1 by C. R. Langston, district secretary, for \$10,000 of 5 per cent. 20-40-year school bonds.

Tex., Georgetown.—Reported voted: \$45,000 of water-works bonds.

Tex., Hearne.—Reported voted: Water-works and electric-light bonds.

Tex., Houston.—The South Texas National Bank is reported to have purchased the \$50,000 of 4½ per cent. 10-30-year viaduct bonds at \$1000 premium.

Tex., Houston.—Official: The South Texas National Bank has purchased the \$500,000 of 4½ per cent. 10-30-year viaduct bonds at \$1000 premium.

Tex., League City.—Bids will be received until 2 P. M. May 9 for \$15,000 of 5 per cent. 20-40-year bonds of League City independent school district bonds; denomination \$1000. Address O. V. King, secretary League City independent school district.

Tex., Liberty.—May 16, it is reported, an election is to be held in Liberty precinct, Liberty county, to vote on \$250,000 of road bonds.

Tex., Longview.—A letter says that \$90,000 of paving and light bonds have been voted. A press report gave the amount as \$100,000; G. A. Bodenheim is Mayor.

Tex., Loving.—Official: \$3500 of 5 per cent. 10-20-year school district building bonds have been sold at par by Young county, Texas; denomination \$500.

Tex., Lufkin.—Bids are reported being received for \$11,000 of 5 per cent. 10-40-year water-works improvement bonds; dated November 1, 1910. L. H. Gray is City Secretary.

Tex., Lockhart.—Reported sold: Caldwell county road bonds.

Tex., Moran.—Official: Voted March 25: \$10,000 of school bonds. M. O. Bray is president School Board.

Tex., Palestine.—Official: May 16 an election is to be held to vote on \$20,000 of 5 per cent. 10-40-year school bonds. A. L. Bowers is Mayor and S. P. Allen City Secretary.

Tex., Palacios.—May 6, according to press dispatches, a vote is to be taken on \$25,000 of school bonds.

Tex., Paris.—Reported voted: \$30,000 of road bonds of precinct 1, Lamar county.

Tex., Paris.—J. B. Oldham of Dallas is reported to have purchased at \$50,250 and interest the \$50,000 of school, street and public-building bonds; Judd Wright is City Secretary.

Tex., Port Arthur.—May 6, according to press dispatches, an election is to be held to vote on \$25,000 of school-building bonds.

Tex., Richmond.—Bids will be received until 10 o'clock May 8 for \$49,000 of 5 per cent. 10-40-year bonds of road district No. 1 for Fort Bend county. G. C. Baker, Jr., is County Judge.

Tex., Rogers.—Reported voted: Water-works bonds.

Tex., San Antonio.—Press dispatches state that \$204,500 of drainage bonds have been approved and bids for same are to be asked immediately. Address Judge John Bartlett.

Tex., San Marcos.—Official: Voted: \$4000 of 5 per cent. 10-40-year street-improvement bonds; denomination \$500. As soon as bonds are approved and printed they will be offered for sale. Address J. R. Porter.

Tex., Silsbee.—Bids will be received until May 6 for \$10,000 of 5 per cent. 10-year Silsbee independent school district bonds. W. H. McNeil is president and W. P. Mayo, secretary.

Tex., Sealy.—Reported voted: \$100,000 of bonds of Austin county road district No. 1.

Tex., Smithville.—Reported that an election is to be held to vote on \$100,000 of road bonds.

Tex., Snyder.—Reported voted: \$16,000 of 5 per cent. 30-year Scurry county jail bonds.

Tex., Terrell.—Official: \$22,000 of sidewalk loan fund and boring deep well 5 per cent. bonds have been authorized; denomination \$1000. Address W. P. Allen. H. Galbraith is chairman commission.

Tex., Van Vleet.—An election is to be held May 12, it is reported, to vote on school district building bonds.

Tex., Winfield.—J. W. Barrett, secretary School Board, is reported receiving bids for \$8000 of 5 per cent. 40-year independent school district school building and furnishing bonds; denomination \$200; dated February 20, 1911.

Va., Blacksburg.—May 16, it is reported, an election is to be held to vote on \$12,000 of 6 per cent. 15-30-year water and sewerage bonds; denomination \$100.

Va., Tazewell.—Reported voted: \$625,000 of Tazewell county highway bonds.

Va., Charlotte Courthouse.—Official: Bids will be received until noon June 1 for \$90,000 of 20-40-year 4½ per cent. Charlotte county road bonds; denomination \$1000; P. N. Morgan, J. C. Carrington and A. B. Rice, committee Board of Supervisors.

Va., Christiansburg.—Official: April 24 an election is to be held to vote on \$40,000 of 5 per cent. 30-year water-works bonds; denomination \$500. Address E. S. Hagan.

Va., Farmville.—Reported voted: \$65,000 of water-works bonds. Address Town Clerk.

Va., Portsmouth.—L. P. Slater, City Clerk, writes: "We have no bonds for issue either just now or in the near future."

W. Va., Lumberport.—An issue of \$10,000 of street-improvement bonds is reported under consideration.

W. Va., Clarksburg.—Press dispatches state that a \$275,000 bond issue is under consideration by Clarksburg independent school district.

W. Va., Huntington.—Official: May 27 an election is to be held to vote on \$300,000 of 4½ per cent. 20-30-year Cabell county road bonds. F. F. McCullough is County Clerk.

W. Va., Wellsburg.—Official: Voted April 11: \$85,000 of 10-34-year school-building bonds; denomination \$500. Commissioners: E. E. Carter, secretary; S. O. Paul, E. A. Sheets and Elmer Hough.

W. Va., New Martinsville.—Reported that Magnolia district has voted \$100,000 of bonds in aid of the proposed new electric line to be built between New Martinsville and Middlebourne.

Varnville, S. C., is receiving bids until noon May 15 for \$7000 of 6 per cent. 20-year school bonds. Further particulars will be found in the advertising columns.

At Maryville, Tenn., bids will be received until 1 P. M. May 15 for \$300,000 of 5 per cent. 10-40-year Blount county road bonds. Further particulars will be found in the advertising columns.

At Americus, Ga., bids will be received until 7 P. M. May 16 for \$40,000 of 4 per cent. street-paving, \$40,000 of sewerage and \$25,000 of water-works 4½ per cent. bonds. Further particulars will be found in the advertising columns.

At Bassfield, Miss., bids will be received until 1 P. M. May 5 for \$6200 of 6 per cent. water-works bonds. Further particulars will be found in the advertising columns.

At Charlotte Courthouse, Va., bids will be received until noon June 1 for \$80,000 of 4½ per cent. 20-40-year Charlotte county road bonds. Further particulars will be found in the advertising columns.

At Marble, N. C., bids will be received until June 1 for \$12,000 of 5 per cent. 30-year bonds of Marble road district, Cherokee county. Further particulars will be found in the advertising columns.

At Asheville, N. C., bids will be received until noon May 22 for \$430,000 of 4½ and 5 per cent. 30-year refunding bonds. Further particulars will be found in the advertising columns.

At Chattanooga, Tenn., bids will be received until 3 P. M. May 17 for \$81,000 of 4½ per cent. 30-year refunding bonds. Further particulars will be found in the advertising columns.

At Richmond, Va., bids will be received until noon May 15 at 104 N. 8th St. for \$25,000 of 5 per cent. 30-year water, sewer and general-improvement bonds of the town of Highland Park, Va. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The Citizens' Banking Co. of Eastman, Ga., is reported to have increased its capital from \$100,000 to \$150,000.

The Bank of Commerce of Hominy, Okla., has, it is reported, increased its capital from \$15,000 to \$25,000.

The Discount Bank & Trust Co. of Memphis, Tenn., is reported to have increased its capital from \$10,000 to \$15,000.

The Bank of Dover at Dover, Okla., is reported to have amended its charter increasing its capital from \$10,000 to \$20,000.

The Bank of Western Carolina at Aiken, S. C., is, according to press dispatches, doing business in its new home on Macon St.

The People's State Bank of Coyle at Coyle, Okla., according to press dispatches, proposes to increase its capital from \$10,000 to \$15,000.

The Melissa State Bank of Melissa, Tex., has, according to press dispatches, amended its charter increasing its capital from \$10,000 to \$25,000.

The Farmers and Mechanics' National Bank of Hooker, Okla., according to press dispatches, has increased its capital from \$10,000 to \$25,000.

The People's Savings Bank & Trust Co. of Birmingham, Ala., is reported to be doing business in its new building at 211 N. 20th St. Henry B. Gray is president.

The Quarterly Savings Bank of Wheeling, W. Va., proposes, it is reported, to increase its capital from \$25,000 to \$100,000.

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